

The AMERICAN RIFLEMAN

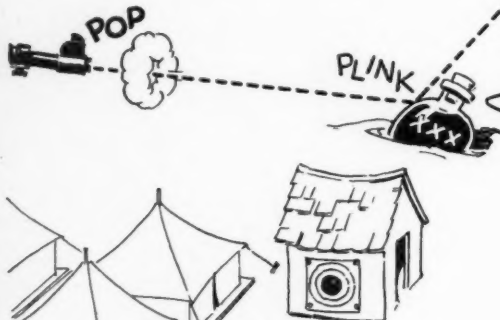


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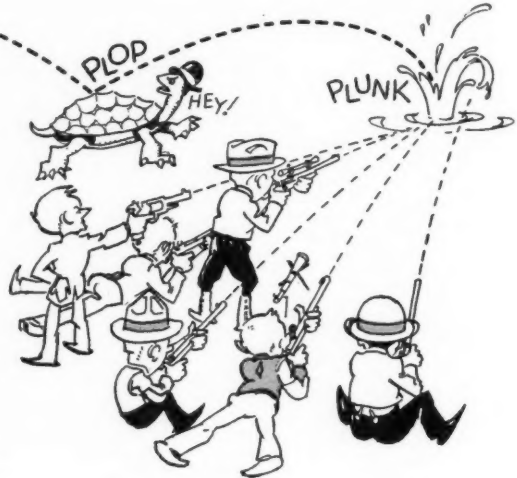
RICOCHETS from CAMP PERRY



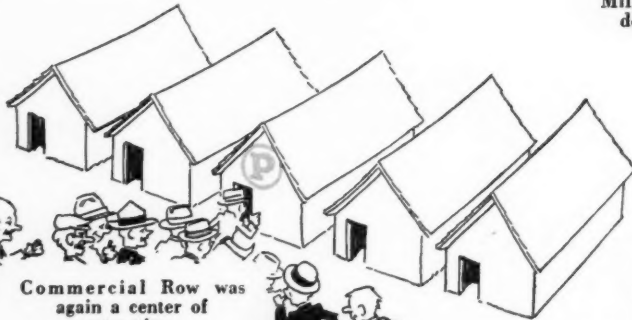
Most of the boys' spare time was spent sighting at targets. They go to Camp Perry to shoot ... and they work at their trade.



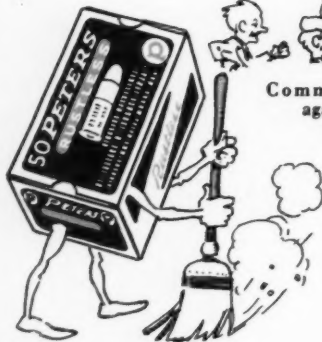
The Royal Canadian Mounted Police again made the snappiest appearance.



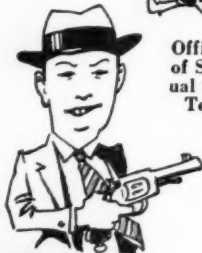
Millions of shots but not a single accident. Hasn't been one for years.



Commercial Row was again a center of attraction.



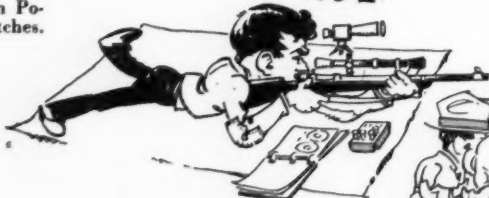
Peters .38 S & W Specials made a clean sweep in Police Team Matches.



Officer D. J. Twohig of Seattle won Individual Police Pistol Team Match.



The Peters Duv-rock trap attracted much attention.



It takes some men about ten minutes to get into the proper prone position. They might do it a trifle faster in a real battle.



YES S-SIR

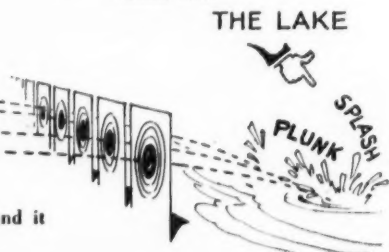
If a cop ever calls on you to halt, and you suspicion he has Peters Ammunition, you'd better halt.



There's always a lot of discussion about rifles, both Pro and Con ... but it's mostly "Con."



As usual, all Lake Erie got out of it was bullets ... and it certainly got plenty of them.





Police at Camp Perry Prove Western Accuracy

AGAIN this year the extreme accuracy and high quality of WESTERN ammunition was demonstrated when a majority of the police pistol teams competing at Camp Perry used WESTERN cartridges. Following are some of the pistol matches won with WESTERN, in addition to a large number of second and third places:

Any Pistol Match, Single Entry—Sergeant J. H. Young, Portland, Oregon—260.
Individual Police Pistol Match—Claude Shaylor, Portland, Oregon, 2nd, Tied for first—271.
Police Pistol Team Match—Portland, Oregon, 2nd—1,098.
Any Pistol Re-entry—H. D. Sherman—172.
.22 Caliber Slow Fire Pistol Re-entry—R. C. Bracken—185.

Slow Fire Pistol Re-entry—Sergeant R. Wilzowski, Cavalry Team—184.
Timed Fire Re-entry—R. C. Bracken—191.
Rapid Fire Pistol Match—E. H. Harrison, Ordnance Department—188.
Timed Fire Pistol Match—Sergeant Young, 2nd—191.
Rapid Fire Re-entry Pistol Match—A. Boring, U. S. Navy—190.
.22 Caliber Slow Fire Re-entry—Geo. Keyes—185.
Automatic Pistol Slow Fire Match—W. G. Carter, Portland Police Team—184.
.22 Slow Fire Re-entry Pistol Match—Geo. Keyes—188.
Timed Fire Re-entry Pistol Match—W. G. Carter, Portland, Oregon—184.
Rapid Fire Re-entry Pistol Match—Claude Shaylor, Portland, Oregon, 2nd—192.
Individual Field Match—Claude Shaylor—49.

Police Departments throughout the country have learned that WESTERN is the best ammunition for use on the target range as well as for service loads. For accuracy, depend-

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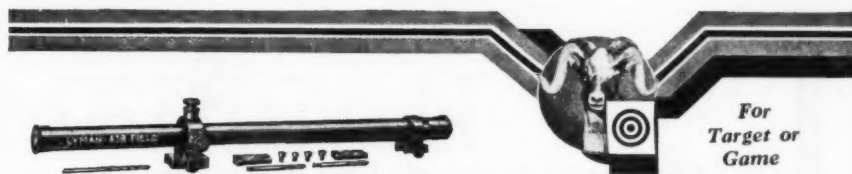
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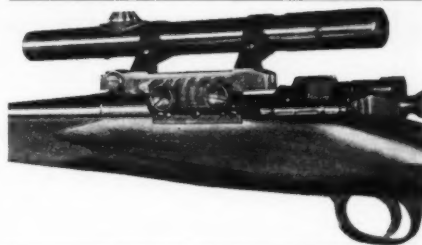
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A handwritten signature in dark ink, likely belonging to S. W. Dimick.

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The AMERICAN RIFLEMAN

Vol. LXXVIII

TABLE OF CONTENTS

No. 11

NOVEMBER, 1930

	PAGE		PAGE
Cover Photo— By N. W. DILATUSH. (See his story in this issue.)		The Thirty-Seventh Annual Sea Girt Interstate Tournament By C. S. LANDIS	19
Editorial	6	A Rifle Miscellany By CHAS. ASKINS	21
The International Matches of 1930 By MAJ. J. S. HATCHER	7	N. R. A. News	31
Into the Mountains of Alberta After Sheep and Goat By N. W. DILATUSH	11	N. R. A. Junior News	37
How Fast Can Ducks Fly? By COL. EDWARD L. MUNSON (Continued from September issue.)	14	N. R. A. Police News	41
Six-Guns for Long Range By ELMER KEITH	16	Director Civilian Marksmanship	43
		Dope Bag	44
		Arms Chest	49

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EDITORIAL

If Winter Comes

WITH the death of the flowers and the almost silent passing of fall, with all its magic beauty and wonder, and trace of sadness, the target-shooter turns from the outdoor range to the gallery, to carry on, uninterrupted, his systematic shooting for practice and competition. Winter, knocking at the door, has no fears for him. But what about the rifleman with the restless, roving instincts of the natural outdoorsman—the man who loves a rifle as a companion in his wanderings, and for whom the straight target game has no appeal? Must he lay aside the cherished companion of his holiday hours when the hunting season is over and the woodchuck holes up for the winter; when the mercury drops out of sight, and the days grow short and the nights long, and the North Wind, in its ceaseless march, wails its dismal requiem for departed summer? Oh, no.

Winter is the time of the far-famed old-time Turkey Shoot. No other type of shooting calls for greater skill than this. No other type of shooting requires more superbly accurate rifles and ammunition. And it satisfies in some measure the primitive hunter instincts of the true outdoorsman. Here the finest shots of the region foregather, and the competition and excitement run high. Here the special, super-accurate rifles are seen, and ammunition into the handloading of which has gone knowledge and skill of the highest order. For the Turkey Shoot is the hunter-rifleman's very own.

But whether one does any shooting or not during the winter months, there are always those numerous odd jobs which were put off while the weather was good and the varmints or other game were abroad in the land: trigger pulls to be adjusted, and actions to be smoothed up; a little job of amateur bluing that really ought to be finished and gotten out of the way,

or the well-worn stock of a favorite rifle which needs a little smoothing up and polishing, with a few coats of oil rubbed in to restore its richness and figure. Perhaps the sights on our pet rifle have not seemed exactly right, and we have decided to fit a larger or a smaller bead, or one of different material.

Possibly our pet hand load has not been giving quite the accuracy we think it ought, and we wish to experiment a little and check up on bore, groove and bullet diameters. On the wall hangs a remodeled Krag that we have learned to love because with a certain load it performs so superbly on chucks or other varmints. It still has the military sling, which we have never liked. Now is the time to put on lighter swivels and a neat hunting sling of our favorite pattern. And then there is the never-finished job of moulding bullets for our favorite miniature loads. And so on, almost *ad infinitum*.

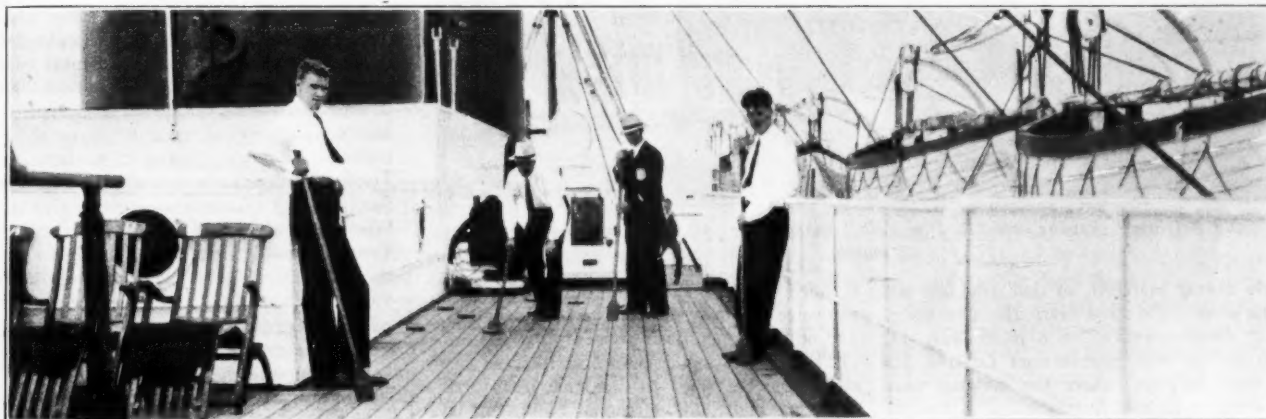
All these things take time, and care, and patience. They can not be rushed and done properly. The only way is to give each job the time and care that it calls for. During warm weather we are restless, and wish to spend every spare daylight hour in the open. A rifle is to shoot with, and the odd jobs can wait! But during each twelve months the "melancholy days" roll around, and give us a chance to put our armories in order. And they prove to be not so melancholy after all. We dust off the work bench a bit, straighten out our tools, and odds and ends of materials and supplies, and adjust the electric light overhead. We then proceed to make up a list of the various jobs that need to be done. When the list is finally completed it contains some rather interesting items, and is considerably longer than we had anticipated. And thus fortified, with a peaceful and contented heart we face the long, quiet hours that lie ahead.

The AMERICAN RIFLEMAN

Vol. LXXVIII

NOVEMBER, 1930

No. 11



Physical training on the "Lapland." Left to right—Parsons, Boles, Bruce, Swanson

The International Matches of 1930

By MAJ. J. S. HATCHER

AT ST. GALL, in Switzerland, in 1925, Major Boles and I, as captain and adjutant, respectively, of the International Rifle Team, saw the Swiss take the Argentine Cup and start a winning streak that lasted five years.

When Boles and I turned the cup over to the Swiss, we agreed that neither of us would be satisfied until the cup was back in America, and that even so we wouldn't be thoroughly happy unless we could actually be present with the winning team and help in a personal way to atone for the St. Gall defeat.

However, the next few years held little satisfaction for this ambition, for at Rome in 1927, at Scheveningen in 1928, and at Stockholm in 1929, the Swiss bettered their already high scores and sent down to bitter defeat the best teams that America was capable of sending against them.

After this long series of disappointments, a tradition began to grow up that the Swiss were unbeatable, and that America could not again win the World Championship.

This was the situation in July, 1930, when Boles and I found ourselves again holding the same positions on the team that we had held in 1925, when the cup passed to the Swiss. It seemed to us a good omen that the same team officials that took the cup to Switzerland and left it there now had a chance to be the ones to bring it back again.



"In Den Valk" cafe, team headquarters for .22-caliber matches

A survey of the team that had been selected as a result of the Quantico tryouts indicated that the chances of success were excellent. The team consisted of the following, all but two of whom were veterans of former teams, as indicated by the figures in parentheses: Maj. J. K. Boles, U. S. Army, team captain (1921, 1922, 1924, 1925, 1929); Maj. J. S. Hatcher, U. S. Army, adjutant (1925, 1927); Lieut. S. R. Hinds, U. S. Army, coach (1924, 1928); Tech. Sergt. J. B. Sharp, U. S. Army (1929); Gy. Sergt. Morris Fisher, U. S. M. C. (1921, 1922, 1923, 1924, 1925); Mr. W. L. Bruce (1927, 1928, 1929); Mr. Frank T. Parsons, Jr.; Mr. Harry N. Renshaw (1929); Mr. R. L. Seitzinger (1927, 1928, 1929); Dr. E. O. Swanson.

The two newcomers were men of exceptional strength and ability—Frank T. Parsons, Jr., former .30-caliber Intercollegiate Champion of the United States, a small-bore shot of note, at present the coach of the George Washington University Rifle Team; and Dr. E. O. Swanson, a Dewar Team veteran.

The shooting at Quantico during the tryouts and afterwards indicated two wonderfully encouraging things: first, that the team had the ability to shoot record-breaking scores; and second, that for the first time in the history of our international shooting we had a squad with all the members



"Old Belgium," showing cafe "In Den Valk," headquarters of American team during .22 matches

nearly evenly matched, so that any five out of the seven could shoot nearly the same score.

The team embarked at 8 p. m. July 11, 1930, on the Red Star steamer *Lapland*, for Antwerp, Belgium, where the matches were scheduled to be held August 9.

During the ten-day trip to Antwerp, the team kept in physical condition by vigorous participation in deck sports, as well as medicine ball and other special exercises prescribed by Major Boles.

In the usual deck sport competitions held on board the team gave a good account of itself, Parsons winning deck tennis doubles, and Seitzinger the shuffleboard doubles, with a handsome cup apiece; besides which, most of the other team members got as far as the finals in the various events.

All things must come to an end, even a ten-day ocean voyage; and Monday morning, July 21, found the *Lapland* steaming up the River Scheldt toward Antwerp, with all members of the team lining the rail and missing nothing of Antwerp that could be seen from the river.

From the ship we got a very fine impression of the size and importance of the town. We were astonished by the amount of shipping in the various docks and along the wharves. The amount of water front, the number of docks, railroad yards, etc., were almost unbelievable. When we expressed some astonishment at the size and apparent importance of the harbor, we were told that Antwerp is a city of half a million people—about the size of Washington—that it is one of the great shipping centers of the world, the largest port in Europe, and the second in the world as measured by tonnage handled. It is aptly called the "Crossroads of Europe." Owing to its central location, excellent harbor and port facilities, and low port charges, freight from many parts of Europe is habitually routed through Antwerp.

The wharves in the city have a water front of 3 miles, and the docks above and below the city add 21 miles more of water front, all of

it filled with shipping, and backed up with extensive and busy railroad yards, warehouses, and other shipping installations.

The wharves in the central part of the city where the big ships tie up have iron sheds one-story high built on top of them, and on top of these sheds is a long water-front promenade, commanding a wonderful view of the harbor and the shipping. There are plenty of benches up there where the people can sit and watch the harbor activities when they get tired of walking.

Our ship tied up to one of the wharves, and we walked down the gangway, to be met at once by the Belgian match officials, who from first to last did everything possible to make us comfortable and to smooth our way.

The gentlemen who met us at the dock were Mr. Clément Ceulemans, Secretary General of the Royal Belgian Shooting Union; Mr. François Cools, Vice President of the Belgian Union and President of the committee for the matches at Antwerp; and Mr. H. L'Allemand, Secretary of the Antwerp Matches.

The year 1930 is the centenary of Belgian independence, and there is a Centennial World's Fair being held at Antwerp. It is in connection with this Centennial celebration that the International Matches were held in Antwerp this year.

When we landed on July 21, we found that the day was a national holiday—the Independence Day. For this reason there were about 200,000 visitors in Antwerp, and the city was about as crowded as it has ever been in its entire history. We soon discovered that when we tried to get hotel accommodations. Most of the hotels in the town were not only filled, but overflowing. At first it seemed impossible to find a place to stay; but finally, with the able assistance of Mr. Cools and the other Belgian officials, we were able to obtain suitable accommodations at a very much reduced rate at the Century Hotel, a new building thirteen stories high, right in the center of the city.

Our Belgian friends also seemed to be able

to work wonders with the customs officials, and in a few minutes the customs examination was over and we were on our way to the hotel with all our guns and ammunition.

On our way to the hotel we noticed that all the signs, even the names of the streets, were written in two languages—French and Flemish. It seems that everyone in this part of Belgium uses these two languages with about equal facility. The Flemish seems to be a mixture of German and English. There are many words that seem so much like English when written that most of the signs, etc., are easily understood. The following examples will make this clear, but the reader must bear in mind that in Flemish "y" is written "ij".

Bakerij (bakery).
Moelkerij (dairy).
Boekerij (library).
Telefoon (telephone).
Sunlight zeep (Sunlight soap).
Wielrijder (wheel rider).
Treinstilstand (train stop).
Ijs (ice).
Van Dijk (Van Dyke).

After our arrival at the hotel we started out to find the range and discover as much as possible about the chances of beginning practice right away. We were told that the small-bore matches were being shot in the city, at the exposition, and the .30-caliber at Brasschaet (pronounced brasscat), about 10 miles out. We found that by taking a tram in front of the hotel (fare one franc—three cents), we could reach the exposition in about fifteen minutes.

The exposition looked something like the Sesquicentennial in Philadelphia, only with this difference: that it is much better than the Sesqui, and, moreover, unlike the Sesqui, this exposition is making money.

There is the World's Fair, "Wereld Tentoonstelling," as it is called in Flemish; also a big amusement section, "Luna Park," and then an entirely separate division of the exposition called "Old Belgium." This is a small city especially built for the celebration, to represent an old-time Belgian town of several hundred years ago. It is extremely quaint and interesting. It has a burgomaster and all the usual officials, and they dress in the old costumes, so that it is well worth a visit.

It was here in Old Belgium that the small-bore and pistol matches were held, in a special building—the "Schietsbarr"—with twenty firing points, and with the wall of one of the forts that tried to defend the city in 1914 as a backdrop.

We also learned that the match officials had found it impossible to obtain a suitable building or room to use as a statistical office; but they had solved this difficulty by obtaining a concession to run a restaurant on the grounds, and then using this restaurant as match headquarters.

This restaurant was called "In Den Valk" (at the Sign of the Falcon) and was run by Mr. G. Devenyns, one of the finest and most accommodating gentlemen that it has ever been my pleasure to meet. He was indefatigable

in helping us in every way; and, moreover, he spoke excellent English, which was a big help. His son was also one of our best friends, and took no end of trouble for us.

You will hear more of In Den Valk, for we ate our noon meals there while we were doing small-bore work at Old Belgium, and generally made the place our headquarters and rendezvous; and everyone there, from Mr. Devenyns himself down to the cook, went out of their way to take trouble for us and make us feel at home.

After having located the small-bore range and made arrangements to start practice at once, the next job was to do the same thing for the .30-caliber. As was mentioned before, we had been given to understand that the match would be shot at the town of Brasschaet, about 7 miles from Antwerp. Upon inquiry of the Belgian match officials, we were told that the range was not at Brasschaet, but at Brasschaet Polygon, about 3 miles farther out, where there is a large military post, with about 4,000 soldiers. It is the site of the Belgian Artillery School, and has an extensive reservation to give space for the artillery firing that is necessary in connection with the artillery instruction. It was considered that there sufficient space could be found for a range for the high-power rifles.

We took a bus to the Polygon, but upon arrival found that the place selected for the range was in a field some 2 miles from the main road. No busses or other public conveyances ran any farther than Brasschaet Polygon, and the remaining 2 miles had to be negotiated on foot, which was none too convenient; or else we had to get a private bus or taxi all the way from Antwerp, which was expensive.

The place selected for the range was on a rifle range belonging to the Army, but the regular rifle range contained none of the facilities necessary for our kind of shooting, for they use large automatic iron targets with a dirt butt behind them, and no target pits.

These big automatic targets are rather interesting. The bull's-eye is a separate plate of iron, and each of the rings is made up of separate plates, divided in the same way as a pie is cut. Each one of these plates is arranged so that when a bullet strikes it it makes an electrical contact and registers at the firing point, showing on what segment the bullet struck. I remember that in 1906, when I was shooting on the Navy range at Annapolis, we had some of these automatic targets experimenting with them, but they never became popular with us.

There were six of these big iron targets, three in front of a butt on the left and three more in front of another butt about a hundred yards away to the right. It was right between these two butts that the place was selected for the target pits for the International Match.

In this way the existing butts would be at the ends of the target trench which was to be constructed, and would form a protection for personnel entering and leaving the pits while firing was going on.

When we first went out to this range, expecting to start practice at once, we found that the target pits were just being constructed,

and that it would not be until the following Sunday that it would be open for use. This was discouraging, but after watching the work for a while, we found more to be discouraged about. It looked as if the range might not be ready even by Sunday.

For one thing, the ground was so low that as soon as the trench that was being made for the targets was about four feet deep, there seemed to be signs of water. This effect was rendered worse by the fact that it had been raining hard ever since we landed, and I may as well add here that it continued to do so, with slight interruption, during the whole of our stay in Belgium.

By the time the trench was 5 feet deep, the bottom was decidedly watery, and to make it worse, this part of the country is perfectly flat, and just about sea level, so there was positively no way to get drainage. However, the water fortunately never got any deeper, and by keeping the pits rather shallow, they got by better than we had feared at first. It was rather safer for a tall man to stoop down while in the pits, just the same.

The rules for the International Matches require a sheltered firing point, and usually in European countries there is a permanent building at the range to shelter the firing positions. As this was not a permanent range, however, no such facilities existed, so some poles were driven into the ground and canvas was laid over them, and tied down, so as not to be blown away. This formed a partial shelter from the heavy rains, and kept off some of the wind. It was very leaky, and at certain places streams of water would trickle in, but the bulk of the rain was kept out.

There were twenty targets provided, not nearly enough to allow us the practice that we should have liked, and not enough to allow the match to be shot in one day, as is usual; so the matches were scheduled for three days: August 7, 8, and 9, one position per day. This schedule was later changed to have the match fired on two days, August 8 and 9.

A very interesting feature to us, and one that caused some concern for a time, was the matter of the arrangements that were pro-

vided for the prone position. As everyone knows, most Americans like to lie at an angle to the line of fire, whereas the common European practice is to lie straight. Moreover, it is common for them to provide a bench to lie on, high in front, and sloping down toward the rear.

At this range the Belgian soldiers had constructed for each firing point a bench or bank of turf, about 3 feet high in front and about 18 inches high in the back, very narrow, and straight toward the targets; and these were for us to lie on and do our prone shooting. To do good work prone from these banks would have been the next thing to impossible for our men.

The rules do not define the prone position, except to say that the body may rest on the soil, in line with the targets or at an angle. All of our men would have been delighted if they could have shot from good old mother earth, but that was impossible, as the targets were so low that they were obscured by weeds and irregularities from the low position.

We tried the banks and found them next to impossible for our shooting, so we talked this matter over with the Belgian authorities, and they readily agreed to make the banks wider, so as to allow us to take a slanting position with less difficulty. They had a gang of soldiers turn to with spades and dig up some more turf, and in a short time the dirt benches were much wider and far more comfortable. As usual, the Belgian officials were anxious to do everything they could, and such inconveniences as were experienced were due entirely to lack of facilities, and in no case to any failure of the Belgians running the matches to do everything humanly possible to make the matches a success for everyone.

We wanted to practice, and the range wasn't ready, but they very kindly allowed us to use it while they were working on it. There were no other big-bore teams there yet, so we were the first to use the range; but the target frames were found to be too big for the targets, there was a brisk wind blowing, and they couldn't make the targets stay on the frames until some changes had been made.



"Old Belgium," showing entrance to .22-caliber shooting stand

Also the telephone lines were not in, so that we couldn't signal, and in general we decided that our practicing before the range was ready was not helping us much, and was hindering them in their efforts to complete the work; so after one day of this we decided to concentrate on small-bore until the large range was officially opened.

In the meantime the other teams from Europe were still on their home grounds, where they had their own facilities and could practice as they chose. At the time, that seemed to be an advantage for them. The trip to Europe is surely a serious interruption to practice. But on the other hand, we were getting used to local conditions, and becoming familiar with the actual range that we were to use in the big match. So perhaps things balanced now.

Now that we were giving our attention, for the time being, to the small-bore, it might be of interest to see what matches there were. All matches were fired at 50 meters, on a target with the 10-ring 2 centimeters in diameter and each other ring 1 centimeter wide, a centimeter being approximately $\frac{4}{10}$ of an inch.

The principal matches were the three team matches for the championship of the world, in each of the three positions. They are not combined into one match including all three positions, as the 300-meter matches are, but each position constitutes a separate match and separate championship. They were scheduled as follows: Standing, August 2; kneeling, August 3; prone, August 4.

Besides these championship matches, there were several less important, though interesting, individual matches. These were: Match L; Standing Re-Entry. It consisted of any number of series desired, each containing five targets of 4 shots each. The first prize, 500 francs, or \$15.

Match N; "Fixed Match." This consisted of two series of 10 shots each, fired consecutively on four targets, the best series being for record, and the second for deciding ties. One re-entry permitted. Prizes consisted of cups and art objects.

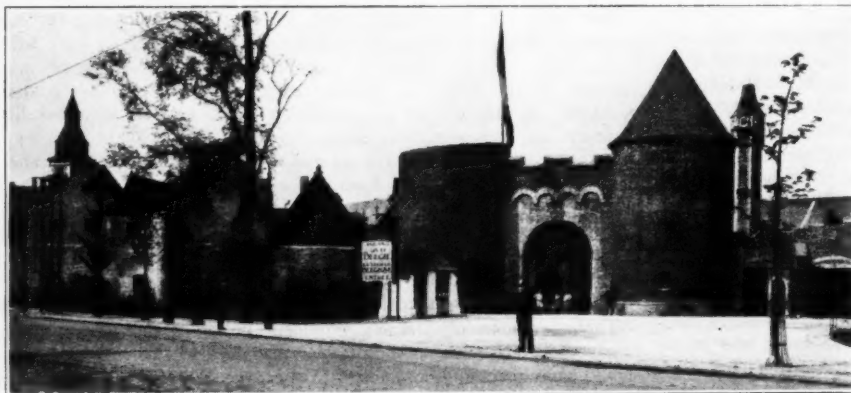
Match P; Master Marksman Competition. This match is in effect a qualification for the Maitre-Tireur, or Master Marksman medals, in either gold, silver, or bronze. The scores for attaining any of these medals in the different positions are fixed in advance, and fixed so that an extremely high score must be attained to get the gold medal. The following are the required scores for 40 shots in any position:

Standing, 365 gold, 352 silver, 340 bronze (world record 374); kneeling, 385 gold, 380

silver, 375 bronze; prone, 390 gold, 385 silver, 380 bronze (world record 390). This looked amply hard enough, especially as the gold prone meant a score equal to the existing world's record. Nevertheless, our men started promptly turning in scores good for gold and silver medals.

The 50-meter shooting was done from a wooden shed specially built for the purpose, with a wooden floor. The prone was shot from movable wooden benches, which we could arrange at an angle to the line of fire if desired. The kneeling had to be done from tables, as there was a wall waist high in front of the firing position.

We soon found that whenever anyone walked on any part of the floor, it would shake the whole floor, and thus disturb the firer by moving the floor he was standing on, or that was supporting his bench or table. We spoke to the Belgian authorities about this, and, agreeable as usual, they divided the floor between the front part, where the firers were, and the back part, where the spectators and officials



Main entrance to "Old Belgium," where the .22-caliber matches were held

walked. They sawed out a narrow section of floor and filled in the space with earth. This removed the difficulty.

In the small-bore shooting, Renshaw used his own Danish .22, and we found that the German R ammunition worked best in this gun. He used this German ammunition for all his small-bore work.

The other members of the team used Springfield, except that Hinds used his own Martini. Kleanbore ammunition was found best for Seitzinger's gun, and Hi-Speed for all the rest; and these makes were used throughout.

It was noticeable that the Hi-Speed had a sharp and vicious report, quite different from that of any of the other makes. Even the German R, with a reputed higher velocity than the usual .22, made a very soft report in comparison with the Hi-Speed.

Another thing that was soon apparent was the fact that our Springfield .22's were not capable of the highest accuracy. These old free-rifle .22's are said to be the same ones that were used in 1924, and the barrels were not so good. The lock action was poor, the set triggers rather crude, and the stocks not ideal. In fact, we were clearly out-gunned by some of

the other teams. In the prone position, where the personal errors are largely eliminated, errors of guns or ammunition show up more than in the other positions, where the difficulties of holding are so great. An excellent team that can hold steadily can win in the standing and kneeling positions with guns capable of only fair accuracy, but in the present state of the sport, the most accurate guns procurable must be used if the prone position is to be won, for there are several European teams that are capable of nearly perfect shooting prone.

The Ideal .22 free rifle would be either a completely redesigned Springfield, which would be prohibitive in cost, or preferably the Winchester single-shot, built on the style that the Winchester people used to call the "Schuetzen," with cheek piece, palm rest, and double set trigger. If we are going to continue in the free-rifle .22 game we will have to do something about rifles, or else face a handicap.

While we were doing small-bore work we observed the pistol-shooting going on in the

same stand. One shooter attracted universal attention and comment because of the unusual position he assumed. He held the pistol near his face, with his arm very much bent, both the upper arm and forearm being more nearly vertical than horizontal. The International Pistol Matches were held on July 31; and when the day was over, the gentleman with the unusual position, Mr. Révilliod de Budé,

of Switzerland, was Champion of the World.

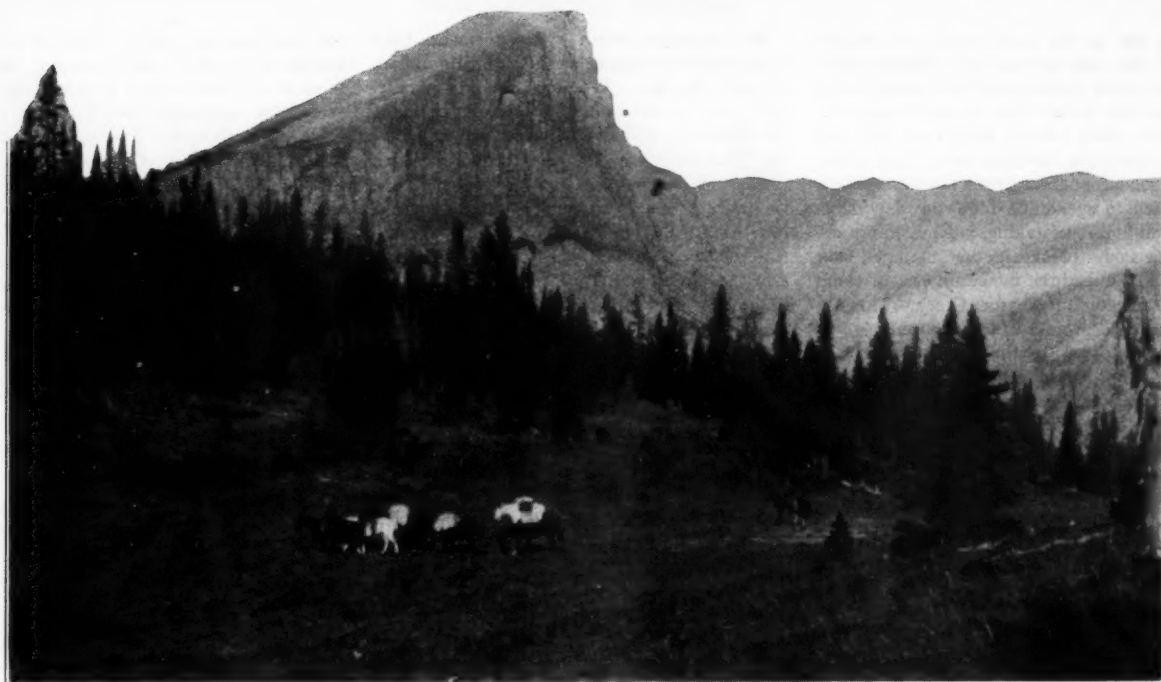
Our preliminary work with the .22 gave many most encouraging scores, so when August 2 dawned we had every hope of being able to carry off the Standing Championship. The team was announced at the breakfast table as Bruce, Parsons, Renshaw, Seitzinger, Sharp.

My own job for that day was on the control committee at In Den Valk, to represent America in marking the targets, deciding doubtful shots, and settling all questions requiring action by the match committee.

The targets come to the committee with the name of the nation pasted over, and all shots are judged and the targets scored before any member of the committee knows whose target it is. When all questions have been decided, the pasted ticket is torn off and the score entered on the master sheets, final and beyond any further appeal.

From this position it did not take long to see that America was rapidly getting a lead. One beautiful possible appeared, which was admired by everyone; and when the tag was torn off, it turned out to belong to Parsons. This was the only one made during the match.

(Continued on page 36)



Leaving Tornado Pass at the head of Dutch Creek

Into the Mountains of Alberta After Sheep and Goat

By N. W. DILATUSH

THE months of August and September, 1928, had for me passed very slowly, as I had promised myself a month of camping in the mountains. The sheep and goat season in Alberta had opened on September 1, and from that time I had been impatient to hit the trail; but as I am in the restaurant business, and interested in catering to tourists in the Waterton Lakes National Park, it was October 3 before I was able to get away. In the meantime I had made all arrangements with "Skee" Prosser, who is a guide and packer in business here in the Park, and A. H. (Pop) Harwood, our genial postmaster, had also been invited to accompany us.

On the morning of October 3, by 10:30 a. m., we had lashed our personal belongings, food, and camp equipment on four pack horses and left Waterton Lakes Park townsite for the ranger station on Pass Creek, where we had our guns sealed, and filled out the necessary Park forms governing camping and hunting parties. With this over, we headed the ponies west, up the Pass Creek Valley. The aspen groves along the streams were ablaze with their fall colors, and it was a beautiful, bright and warm day. The background ahead of us was of heavy green timber on the mountain sides, while the bare peaks still bore the remnant of an early snow. This combined to make a most wonderful setting for the beginning of a mountain holiday. I do not know of a more wonderful moment in a sportsman's life than that of starting on a hunting trip under these conditions of nature, with the hunt and the

good fellowship around the camp fire lying in the near future.

We were mounted on good horses, and steadily climbed up the valley, the pack ponies with their white pack covers bobbing on the trail ahead of us. Soon we entered the cover of heavy green timber, and in the trail and in shaded patches of snow we saw numerous tracks of bear, both black and grizzly; of countless deer and the odd moose and elk, showing plainly what a paradise the Park protection affords the game.

Following on up through the green timber



"Skee" Prosser with his trick horse, "Peanuts," putting on a show in a mountain arena

we reached the summit between the Waterton Lakes Park and the Crow's Nest Forest Reserve; and, turning north, dropped over onto the headwaters of the Castle River, and followed this down to an old ranger cabin. It was then about 4 o'clock in the afternoon; so we decided to pitch camp for the night. With good horse feed, plenty of fish right in our front yard, and an abundance of good dry wood, this was an ideal camp right in the heart of mountain surroundings. The horses were put on feed, supper was cooked and eaten, and our beds made down before dark, and we then lit our pipes and stretched out before our first camp fire. The ranger cabin was in a poor state of repair, the roof having fallen in; therefore, as the night was clear and warm, we had made down our beds on the porch, and did not put up our tent, merely piling our packs and dunnage alongside our beds, and using the tent as a tarp, spreading it over all to keep off the morning dew. I awoke during the night to the tune of rain drops on the tarp. I thought that it was near morning, and intended to stay where I was at least until daylight; but upon looking at my watch with the aid of a flashlight, I was surprised to find that that instrument had both hands on "12." As it was starting to rain larger drops and more of them, I awakened Pop, who was sleeping next to me. We crawled out, donned rain coats, and put up the tent temporarily. We awoke next morning with the rain still coming down, so after breakfast we staked down the tent, gathered a supply

of wood, put up the camp stove, and decided to spend that day by the fire. Shortly after noon the clouds cleared, and Skee went out to look after the horses, Pop to catch some fish for supper, while I had a little nap, and then gathered wood for the night fire. That night, after a good supper of fresh mountain trout, we decided to spend the following day sight-seeing and picture-taking. Next morning, after an early breakfast, we mounted our horses and climbed the mountain east of camp to the headwaters of Yarrow Creek. This has an elevation of around 7,000 feet, and gave us a magnificent view to the east out over the prairie. We spent a couple of hours eating lunch, taking pictures, and enjoying the scenery, and returned early to camp, considering it a wonderful day, well spent.

The following morning we broke camp

We journeyed north by easy stages, fully enjoying every minute of the beautiful Indian summer weather. We were running parallel with, and at the foot of, the main chain of the Rockies. Finally, entering the valley of the North Fork of the Old Man River, we turned up Dutch Creek and proceeded to the headwaters, where we camped at the summit in a beautiful Alpine meadow. This was the Alberta-British Columbian boundary line, and also the Continental Divide. This was an old hunting ground of mine; but as I had not been there for four or five years, we spent two days exploring the country. As it was late in the season, the goat and most of the sheep had pulled out for their winter ranges in the lower country. During these two days we saw, in all, about fifty head of ewes, rams, and young lambs, but no heads of the size we were

sag down into the valley. Comfortably seated among the rocks, I was enjoying the mountains in all their natural grandeur, and at the same time watching a bunch of goats feeding on a distant slope. During previous years I had killed plenty of goats, and I was not looking for any now, except that they be particularly big ones; and my glasses showed that in this particular bunch there were none of this kind. Suddenly I caught sight of an immense grizzly coming through the sag. He passed around under the ledge of rock, and commenced feeding among the scattered pines on the opposite side of the sag from me; and as he shambled around, his coat shook and glistened in the sunlight. Truly, I thought, the King of the mountains! The range I estimated to be between 400 and 450 yards. I was all set, when suddenly I remembered



Our first night's camp at Meadow Cache

and headed the ponies down the trail following Castle River. At each fording of the river, rainbow trout could be seen scooting for cover, and the trail was literally covered with the tracks of large numbers of elk. While we did not actually see any of these animals, their tracks and trails were in evidence on every hand. The country we were passing through was the Crow's Nest Forest Reserve, which is also a game preserve, and truly a country to delight the heart of any nature-lover. By nightfall we had covered close to 30 miles, and camped with the forest ranger in charge of this district. The next morning the seals were taken from our guns, and we were issued a camping permit which was good anywhere from there to the next ranger station, 60 miles north. We were now out of the game-preserve boundaries, although still in the forest reserve, and were ready to start for the high country with its sheep and goats.

looking for. At this point Pop's duties as postmaster at Waterton Park called him back, we having then been out two weeks. Therefore we moved back down the valley, and pitched camp, and Skee accompanied Pop to the nearest ranger station, from which he telephoned, and was later met by car. Skee returned to camp with the horses.

The following morning we broke camp and headed north once more, still following the main range. We would travel a day and then make camp at a good location, while I would explore the likely looking game pockets, some of which I had hunted before. Thus the time passed all too quickly, until the day was approaching for our return, and I realized that I must do some serious hunting if I intended to take back the big head which I desired.

One afternoon, while following a well-worn sheep trail, I came to a low sag in the range. In front of me was a wash leading from the

that my rifle was only loaded with 120-grain ammunition, the heavier loads having been left at camp on this day. I did not think that this light bullet on grizzly was a sure thing at that range, as I realized that I would get only one shot, owing to the evergreens among which the bear was feeding. As the wind and the contour of the earth were very favorable for a sneak, I decided to get on the ledge above him, which would give about a 100-yard shot; and, as I thought, a sure kill. I had to take only a couple of steps and he would be out of my sight, and at the same time I would be hid from his view. I made my sneak to the ledge with as much haste and as little noise as possible; and, crawling out on my stomach, I expected to see the grizzly just below me. But no bear was in sight, nor were any brush or little trees shaking, or any other signs in evidence that there was a bear in the country. I lay there for



Some of the sheep country as viewed from our camp on Slidden Creek

what seemed to me to be half an hour, when suddenly the breeze came up the canyon in little puffs and whirls. At the same time I heard a snort from the grizzly as he got his first sniff of man; and I got just a glimpse of him as he passed a small opening, headed for the dense timber. I lay and listened until the crashing of the timber and the sound of his terrified snorts died away in the distance. I then rose and pointed my toes toward camp, consoling myself with the thought that I would rather have him go his way uninjured than to have crippled and lost him in the heavy timber, with no tracking snow or dogs to trail him up. Moral, "Be prepared for grizzly when in grizzly country." I saw much digging and other grizzly signs, but this was the only bear seen on the trip.

Possibly to compensate for this, the following day was to be the bright spot in my quest, for at about 11 o'clock, when I had climbed up into sheep country and was following a rocky ledge through the timber on the mountain side, to my great surprise I heard rocks clatter underneath and behind me. Upon turning in that direction I caught a glimpse of a magnificent ram as he came up from below on the ledge, and passed on up into the heavy timber. Following him came seven more of various sizes. They had evidently been down in the bottoms for water. I was within about 60 yards' range and could have bagged any one of the bunch of followers, but my heart was set on the big fellow ahead. I took up their trail, and found that upon reaching the top they had turned south on a well-worn sheep trail which would lead them to another basin about 4 miles away. This I decided was where they were headed for; and, as this was in the general direction of camp, I intended to follow at my leisure and make sure by the aid of my glasses that they entered this basin, then return to camp, and go to the basin the next day after they had quieted down, and try for a sneak onto them. After following the sheep for about an hour I came out on a little hogback overlooking a big basin in the slide rock, bare and barren with the exception of a little stunted patch of green growth about 3 feet high and possibly 50 yards in diameter, just above the trail in the middle of the basin. In this growth my eye caught sight of a patch of white, but before I could raise my glasses my

big ram and his seven followers broke cover, running diagonally around the basin from me. Dropping to a sitting position on the side hill, and using elbow-and-knee rest, I fired and saw a rock smoke just under the leader. I held higher for the next shot, just under his neck; and at the crack of the gun the ram wheeled, leaving the bunch, and started up toward the rim of the basin, exposing his other side to me. I now saw a large red patch in his flank, and realized that my shot had been low and too far back, although the ram had slowed down and was mighty sick. Now that I had the range, my next shot broke his neck where it meets the shoulders, and ended his suffering; and I realized my dream of a good head. Counting my steps as I walked directly to him, it was 520 good big steps, and I felt well satisfied with the old 1917 Enfield and the .30-06 Western 180-grain Lubaloy, which combination has brought to bag much in the way of big game for me in the past, some of it at extreme ranges.

The following day was used to bring up the pack horses, and photograph and carry out the big head, the horns of which measured 18 inches at the base. We stayed two more days in camp, fishing and exploring. Skee erected a horse corral for future use, and blazed out portions of some old trails. He would usually have supper about ready upon my return each night; and after the dishes

were washed and we were seated in front of the camp fire with our pipes going, he would frequently get into a reminiscent mood, regaling me with stories of his five years' experience in Glacier National Park as a guide for the Park Saddle Horse Co., making frequent references to the exploits of "Dirty Shirt Smith," the "Bet 'em All Kid," "Millionaire Johnson," and various other guides well known in the handling of the summer tourists. This always passed the evening all too quickly for me, and kept me in a fit of laughter until I would roll in and fall asleep.

On the 28th of October we awoke in the morning to find nice little snowflakes sifting down upon our camp high up in the timber on the main range. We immediately got breakfast over with, and packed camp and turned the ponies homeward without delay, pulling down for the lower country, as it was late in the season and we did not wish to have the horses in the high mountains with their feet covered with snow. On the way home we left the mountains and traveled back south through the foothills, arriving home four days later.

I do not think that an account of any hunting experience is complete without some reference to equipment which an experienced man has found to be, in his opinion, the best for a given district; therefore, I would recommend to anyone wishing to make a trip in this section of the Canadian Rockies the following: The first item on the list is rifles; and I think that for big-game hunting the .30-06 with 180-grain Western Lubaloy ammunition is best; and where the rifle is to be carried in a scabbard on a saddle horse, and for climbing in sheep and goat country, I prefer the new lightweight Mauser, with peep sight mounted on the tail end of the bolt. This sight, the target experts will claim, is not accurate; but experience will prove it amply good for hunting purposes. No doubt the modern restocked Springfield, with a telescope sight, is a fine target arm, but I find that they are heavy and awkward to carry on saddle horses in climbing mountains, on

(Continued on page 24)



Stopping to inspect Alberta-British Columbia boundary monument, Continental Divide, Canadian Rockies

How Fast Can Ducks Fly?

By COL. EDWARD L. MUNSON

(Continued from September issue)

IV

THE importance of atmospheric influences, as they affect rate of movement over fixed points, seems rarely to be taken into consideration. The velocity of the bird over the earth, whatever this may be, seems popularly attributed to its own efforts alone. Hence observers have noted wide variations in the alleged speed of flight of birds at the lower levels, even of the same varieties. A recent scientific magazine contained the following: "Wild ducks vary in the rapidity of their flight from 37.2 to 93.1 miles per hour, which approximates the speed of an express train." A statement with variables inclusive up to 300 per cent certainly gives no clear idea as to the speed of flying ducks.

Further, the broad term "wild ducks" is not only highly indefinite, but misleading. It includes a further factor of error, in that within the generic family of wild ducks various of its numerous species are well known to differ widely from each other at the rate of speed at which they fly. Askins, from his own experience, gives the following estimates for the speed of different varieties of ducks:

Variety	Speed in feet per second	Average speed
Mallard	55-90	75
Spoonbill	55-85	70
Pintail	60-100	80
Widgeon	80-100	90
Greenwing teal	100-130	115
Redhead	110-130	120
Bluewing teal	120-140	130
Canvasback	130-160	145

Reducing velocities in feet per second to miles per hour gives the following results:

Speed per second, feet
59
73
88
104
120
132
146

Speed per hour, miles
40
50
60
70
80
90
100

Personally, in years gone by I have made many readings with the stop watch as to the speed of ducks flying over known distances, with results reasonably coinciding with those of Askins. But these past readings necessarily related to ground speed, for there was then no way of measuring the velocity of these birds in the moving medium of the air in which they traveled. In a broad way, however, such figures showed that the rapidity with which ducks fly varies very considerably with the species of duck. Canvasbacks are swift birds, with mallards much further down the speed list. Some sea ducks, like the scoters, lumber along so clumsily that any other variety will pass them. The experienced hunter accordingly learns to identify the species that, for the instant, is his target, and modify his lead accordingly.

No one seems to have offered any comprehensive explanation as to why some species of ducks move more swiftly through the air than do others. Muscular development can scarcely be the determining factor—else the powerful but cumbersome sea ducks, as the scoters and eiders, would prove to be the faster, while, as a matter of fact, they are the slowest of all. If we compare the mallard and canvasback, they are birds

of almost the same size and of apparently similar physical power; yet in the tests to be later described, the greenhead was capable of only a little more than two-thirds the speed of the grayback. Nor do length and breadth of wing seem to enter into this difference, for these dimensions in the slow mallard are about 20 per cent

greater than in the swift canvasback, though called upon in both cases to support about the same body weight.

From the best of my observation, it seems that the number of wing beats of the swifter ducks, in a given period of time, is materially larger than that of the slow-flyers. The ruddy duck has a particularly small wing surface in proportion to body weight; yet when it gets fairly under way hardly any other duck seems able to pass it, and its wing strokes are so rapid that they almost blur. It seems to be a general rule that, with the faster varieties, their lessened area of propulsive surface is more than compensated for by a greater rapidity of wing beats against the supporting atmosphere. And it is also very likely true that the compact, bulletlike, stream-line conformation of such swiftly flying birds as the canvasback and bluebill helps in the matter of speed through reduction of air resistance.

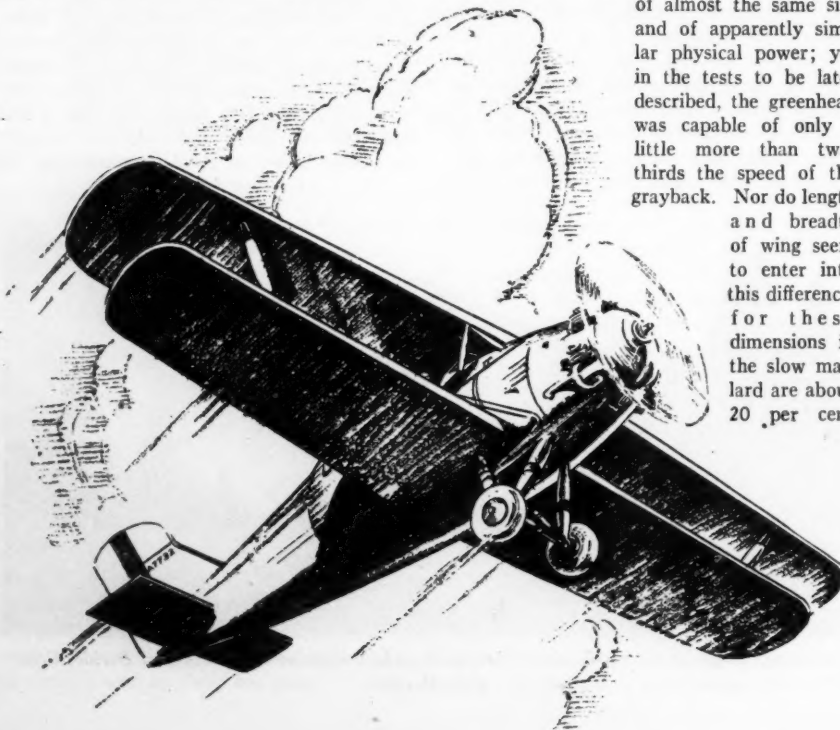
V

It is apparent from what has gone before that wide diversity of opinion exists as to the swiftness with which ducks fly. Such discrepancies seem natural, for few if any observers seem to have attempted to analyze and evaluate their ground speed in respect to its component parts. Few, also, seem to have approached the problem except on a basis of snap judgment, preconception, or faulty interpretation. Opinions, and not facts, have governed; and when unverified opinion opposes dissimilar opinion, nothing but confusion and inconclusive argument can result. The only way that a fixed idea can be overcome is by the logic of demonstrable facts.

How might definite facts on the matter be secured?

It seems to me that there are two points essential to obtaining reliable information as to the flight speed that waterfowl can themselves develop. First, the observer must be competent to identify the species of bird being tested out. Second, the speed tests must be air tests, to determine what velocity the species in question is able to attain through the atmospheric medium that supports its body in flight. Such air tests can be made only from aircraft sustained in the same gaseous medium as the birds pursued, and which are therefore equally and simultaneously susceptible to the same atmospheric influences.

Wild fowl, as is well known, are ordinarily straightaway flyers. They do not deviate from a contemplated course except from very definite attraction or compulsion; and it seemed reasonable to assume that the first effect of airplane pursuit would be to cause the frightened bird to attempt more speed. Only when the latter was forced up to the limit of physical ability would the bird abandon its efforts to outfly the plane, and seek



to escape by swerving and dodging. It seemed fair to assume, therefore, that when a following plane could overtake a flock, force it to break up, and make its individual birds scatter in new directions, the maximum flight speed of the latter had been reached.

It was also believed that if a reading on the anemometer of the plane was taken at the instant that the ducks broke and dodged, information of definite value could be secured. The anemometer of an aircraft does not show its rate of speed over the earth's surface; but it does show the rate of speed at which the machine passes through the air, whether in calm, cross currents, against a head wind, or with a following wind to help it along. And as the atmospheric influences that operate to affect the speed of the airplane over the earth's surface will likewise affect the ground speed of the flying duck, it seemed clear that the anemometer would likewise indicate the true air speed developed by the waterfowl. The only element of error in such tests appeared to be the small one of the proper deduction to be made for the difference between the lesser speed of the bird that was overtaken, and the greater rate of the airplane that was going faster. Such deduction for the difference between the two speeds would necessarily have to be a matter of judgment, but should readily be made within close limits.

The idea of measuring the speed of ducks by pacing them with an airplane was intriguing. I broached the proposition to my aviator friends, and told them what was wanted. In our part of California there is an abundance of ducks; and it seemed as if data as to the flight speed of waterfowl could be accumulated by the airmen as a side line in the performance of their routine duties.

But the results were disappointing. Aviators seek altitude so as to have opportunity to volplane down in case of engine trouble, and most of their routine flying is done far above the levels at which ducks usually travel. The aircraft available were land planes, and their pilots were not enthusiastic about flying low over water. Some planes were not fitted with anemometers. Some could not hold the air except at an unduly rapid rate of speed. Most aviators were not good enough ornithologists to differentiate between various species of duck. As a result, information came in slowly, and much of it was of such general nature as to have little value for the purpose in mind. It was clear, after about a year's delay, that reliance on others was not to be depended upon. But there was a way to meet the difficulty. I could go aboard an airplane, and get the flight data for myself.

VI

So it was that I sat in the plane as it swung out over the bay, climbed for a couple of thousand feet, and headed into the gentle breeze.

From the height at which we floated, the view was glorious. Sunshine bathed the world with gold. The sky line of the city, seen through a haze from the sea, was

softened to unreality. Toylike ships churned the sapphire bay. Tiny cities opened up below—then fled behind. There were tawny marshes, golden pastures, russet orchards, greenery of oak and eucalyptus, and in dim distance a purple wall where high Sierras met the sky.

Suisun Bay was our destination. It lies at the delta of the great rivers of California; a broad reach whose shallows and brackish water attract waterfowl in countless numbers. The bay was 30 miles away, but the airplane reached it in 20 minutes. Half a mile high, we circled about and reconnoitered.

This year the fall had been rainless, the bottom lands were still dry, and waterfowl that usually scattered over a vast inundation were now massed on the waters of tidal flow. And their numbers were tremendous! Vast swarms hid the water in all directions—ducks of all varieties, geese of half a dozen kinds, and clumps of swans. As far as the eye could see, their flocks lay like shadows on the bay—shadows measured not by units or even thousands, but by acres and tens of acres. Each species of fowl had flocked together according to its kind—mallards, canvasbacks, pintails, snow geese, gray geese, and what not. On the whole, the birds were wary, and seemed fearful of the plane. As we swung over them, they rose below in billowing swarms that screened the earth. We circled about; then spiraled down.

Ahead on our course, 10,000 pintails rose in wild dismay. The plane, dropping steeply from its height, was upon them before they knew it. Too close, for we were among them before they could climb and scatter. The air was full of swirling fowl that darted, crisscrossed, and fled away. The plane zoomed up swiftly, to pass above the milling swarm. Flying ducks might break a propeller or crash the pilot. Even above the earth there are menaces to traffic.

Off on the flank, a bunch of pintails had straightened out. We swung after them. The flock flew its fastest to stay ahead, but the plane overtook it swiftly. We had nosed within a few yards when the birds broke and scattered. Most of them swooped to escape, I noticed, using gravity to increase air speed. I glanced at the anemometer as they split and swerved. It stood at 85. Our speed was too fast for pintails—much too fast. I scribbled this on a message pad, and held it up to the pilot.

The index dropped to 75. Off by itself, a lone pintail struggled to get away, and we turned to its pursuit. Even at this lower speed we gained rapidly. The duck strove to its utmost to stay ahead. Its rate of wing beats rose, and it turned its head from side to side to watch its strange pursuer. Still we drew nearer. Suddenly it realized that we could outspeed it, and in panic it swerved away and angled down; "72," the pointer showed, but the pintail was doing less than that. Judging by the rate at which it was overtaken, its flight speed seemed about 65 miles an hour. Other tests on the



same variety followed. We ran down easily on pintails, with dial readings at 72 to 75 miles per hour. Always there came a time when the birds ceased trying to outfly us, and broke and dodged. From our races with the pintails, I could credit them with air speed of no more than 65 miles an hour.

There were a few widgeon on the bay, and we tested out a bunch. If there is any difference between their speed and that of pintails, it was too small for me to estimate. With our windgauge registering 75, the widgeon scattered quickly.

Our maneuvers brought us near a cloud of canvasbacks, and the plane turned after them. Canvasbacks are one of our fastest ducks; yet it was surprising how rapidly the space between us lessened; "85," said the dial, as we closed in. The "cans" struggled to outrace us; but their straightaway speed was not enough. Suddenly their arrow broke, and its units swooped in all directions. I turned to the dial quickly. The indicator still stood at 85. The birds, apparently, could do no more than 75—and later tests showed this estimate to be somewhat generous.

We harried the canvasbacks, flock by flock, until data on them seemed enough. Each break had its anemometer check—80, 82, and a maximum of 84, they read. "Cans" are relatively swift birds; that is certain. In our tests they moved through the air faster than any other kind of duck. Nevertheless, the greatest air speed of which they were capable seemed only about 72 miles an hour.

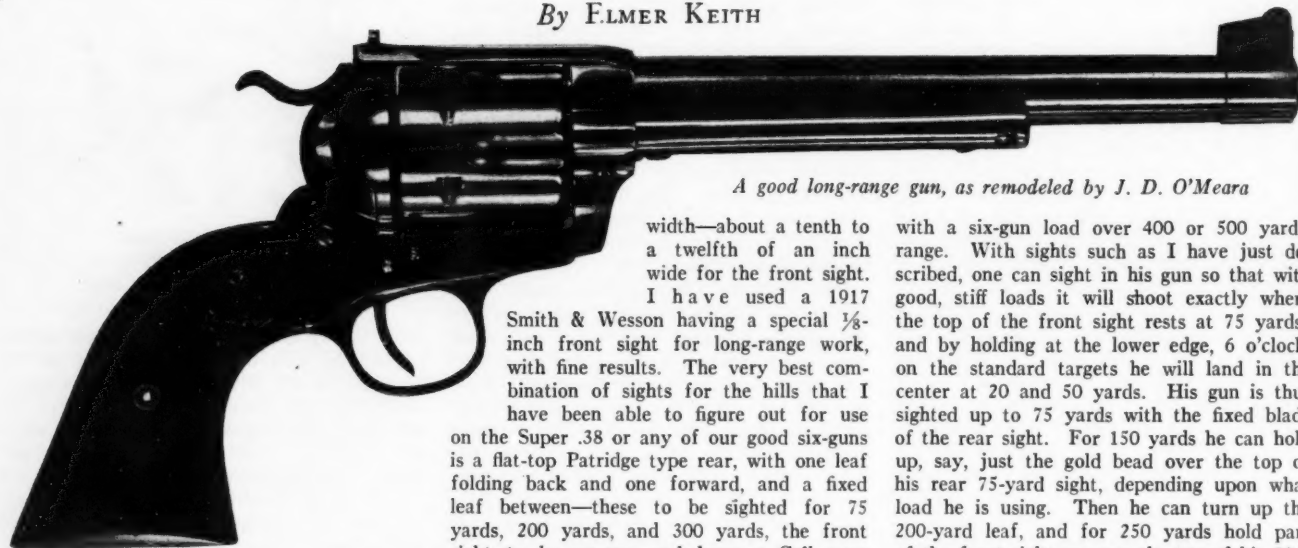
Many hunters regard teal as the fastest duck. Perhaps their small size adds to the impression of speed. Our plane did not chase any teal directly, for it was always following some other species the few times we chanced upon them. But twice I saw a bunch of greenwings flying along with canvasbacks, and the latter were outspeeding them. If canvasbacks can extend themselves to a rate of 72, certainly the air speed of greenwings is several miles an hour lower.

Most wild-fowlers realize that mallards are relatively slow ducks. Immense flocks of these birds were scattered about the bay, and after finishing with the canvasbacks we turned attention to the greenheads. So far as exact measurement of their speed was concerned, the results were not wholly satis-

(Continued on page 30)

Six-Guns for Long Range

By FLMER KEITH



A good long-range gun, as remodeled by J. D. O'Meara

width—about a tenth to a twelfth of an inch wide for the front sight.

I have used a 1917

Smith & Wesson having a special $\frac{1}{8}$ -inch front sight for long-range work, with fine results. The very best combination of sights for the hills that I have been able to figure out for use on the Super .38 or any of our good six-guns is a flat-top Patridge type rear, with one leaf folding back and one forward, and a fixed leaf between—these to be sighted for 75 yards, 200 yards, and 300 yards, the front sight to be square, and have a Call type gold bead set into its face. Then below the gold bead should be inlaid fine gold cross lines, these to be spaced about the same distance apart as the width of the gold bead.

The longer the sight radius the better for this extremely accurate work. Quite a little may be gained from putting a flat top on the S. A. Colt, and extending it as far back as possible. This forms a place on which to put the rear sight, fully $\frac{1}{4}$ of an inch back of its regular position. An extension sight can also be fitted to any S. A. or D. A. gun, bringing the rear sight back as far as possible while still leaving the hammer clear.

In shooting at rifle ranges with a six-gun that does not have an adjustable rear sight, I hold part of the front sight up over the top of the rear sight, then set the object I wish to hit on top of the front sight. The rest is a matter of holding and squeezing.

One must learn the trajectory of his particular gun and cartridge; and believe me, there is a startling degree of trajectory curve

with a six-gun load over 400 or 500 yards' range. With sights such as I have just described, one can sight in his gun so that with good, stiff loads it will shoot exactly where the top of the front sight rests at 75 yards; and by holding at the lower edge, 6 o'clock, on the standard targets he will land in the center at 20 and 50 yards. His gun is thus sighted up to 75 yards with the fixed blade of the rear sight. For 150 yards he can hold up, say, just the gold bead over the top of his rear 75-yard sight, depending upon what load he is using. Then he can turn up the 200-yard leaf, and for 250 yards hold part of the front sight up over the top of his 200-yard leaf; and the same method for 300 yards.

Then, when one has learned to hit reasonably sized objects—say a man—at 300 yards, let him go to the most interesting of all long-range six-gun work, namely, from 400 yards to half a mile. This is where any little discrepancy of loading shows up; also any variation in the primers. It takes exceptionally accurate ammunition for this work. After a six-gun bullet has journeyed along this far, it takes very little wind to drift it badly. Even a slight, almost imperceptible breeze will affect the bullets. Then one must hold off as much as he is being drifted. By utilizing a 300-yard rear sight, and holding all, or about all of the front sight up, one can get a bullet over from 500 to 800 yards' range.

One thing is necessary: you must have either a dry, dusty country to shoot over, or else water, so that each bullet splash can be instantly seen; otherwise one would find it quite impossible to hit anything over an un-

MANY men contend that a six-gun is about useless at over 50 yards. I've even heard men say that no one could hit anything at over 30 yards with a short gun, except by accident. A few years ago a revolver club in Kentucky held 300-yard turkey shoots. These men used target model Colt and Smith & Wesson .38 Special and .44 Special guns, and hit the turkey silhouette at least once with practically every gunful of shells; and often hit it two or more times out of six shots. Such shooting is not a myth, and any good six-gun shot can do it if he will practice consistently, with the proper tools.

A good, accurate gun and accurate ammunition are absolutely essential to this work. For strictly target long-range work a .38 Special will do; but an accurate, heavily-loaded .44 Special is the better cartridge, especially for game or for any long-range work in the hills or desert. Bullets must be long and accurate, and powder charges should be as heavy as the gun will safely stand.

There is no reason why Colt and Smith & Wesson can not fit their guns with suitable sights for this work, and at little additional cost over that of their present target sights. I have seen the old Colt Dragoons fitted with a very good three-leaf rear sight for longer-range work. Such a sight should cost little more than the regular target rear, and would make the guns much more effective at long range. I personally like the Patridge type of sights for long range, as with them it is much easier to hold the same amount of front sight up each time. Guns with low sights such as the Colt .45 and Super .38 automatics are hard to shoot accurately at long range. If the Super .38 were fitted with a front sight of at least twice its present height, and a three-leaf rear sight, it would make a good long-range gun. I like sights of the Patridge type to be of fair



The proper method of holding a slip gun

known distance and at such extreme ranges with a six-gun. This is where the .44 Special, .45 Colt, and .38-40 and .44-40 have it all over the .38 guns. The heavier bullets throw up much more dust than their lighter cousins. Hence they can be much more easily seen, which helps a lot in landing the next slug on or nearer your object.

When one gets accustomed to doing this kind of shooting it is surprising how quickly he learns to take advantage of different positions. Two of the best I have found are: sitting with the back against a post, tree, rock, or any other available support, with the hands and gun held between the knees. The cylinder joint of a six-gun should be held past one's knees to avoid powder burns. The other position is lying on your left side, with your left hand propping up your head; right leg drawn up, and gun arm resting along the right leg for additional support. This is a good, steady position, though not quite the equal of the first one.

Good work may be done offhand, using both hands. When once accustomed to these positions it is much easier to kill game than from the regular prescribed target offhand position, especially in a wind or after a hard climb, when it is very hard to hold steady. Target positions are all right in their place, but when shooting game or in case of a gun fight, then there is no law to prevent a man from shooting from the position in which he can hold the best.

Many good law officers that are gone today would still be on duty if they had taken advantage of all available cover, and had been able to do good shooting at over ordinary six-gun ranges. Too many officers are good fist-fighters and are strong men, and depend too much upon getting to close quarters with a criminal. Often, too, they are compelled to use a six-gun against a rifle or shotgun. If they can do good long-range six-gun shooting, and can hit their man at least once out of six shots up to 200 or 300 yards, then they have a much better chance of enforcing the law, to say nothing of remaining in this "vale of tears."

The officer is always at a disadvantage, anyway, especially when in uniform, as the crook can spot him instantly, while it is often a different matter for the officer to spot his man in civilian clothes. Officers should carry two guns—one a good, heavy gun capable of accurate work over long ranges if necessary; the other a short, handy, but also heavy gun for quick work at close quarters.

There is no place in an officer's equipment for a light-calibered gun. Too often they have to empty such a weapon to stop one criminal. I would not recommend any gun of the .38 Special class. There is only one gun of the .38 caliber (so called) that is suitable for an officer's use, and that is the Colt Super .38; and even it is a poor killer. It has the advantage of carrying ten shots; and, properly sighted, makes an accurate long-range weapon. No automatic is as reliable as a good six-gun. The .38-40 is not a .38 at all, but a .40-caliber, and has good stopping and killing power; but this is a

rifle cartridge, and has the added disadvantage of being very difficult to reload, requiring the full-length re-sizing of all fired cases.

Last summer I used a Super .38 on woodchucks for a couple of months, killing between fifty and seventy-five of them at various ranges up to and including 150 yards, though

just their tails showing. A gun that will not stop a chuck is hardly the weapon for defense work. The Super .38 is very accurate and carries up well, and is excellent for brain shots even on big game; but it is too small in caliber to produce the shock necessary for body shots on man or game.

In our heavy six-guns there is none superior to the .44 Specials for long-range accuracy. The .45 Colt will do about as well, but one must use Remington black-powder loads or else hand load. The smokeless .45 Colt loads all lack powder. The Western semi-smokeless loads cake the barrel with powder fouling worse than the black-powder loads. I know of no big six-gun cartridge that is so easily reloaded accurately as the .44 Special. The loading tools themselves are usually

chambered with closer tolerances than those for the .45 Colt. Also the cylinder walls of the guns, and especially the rear ends of the barrels where they project back through the frame, are thicker and will stand more pressure than in the case of the .45. The .44 Special is one of our most accurate revolver cartridges; and given the same weight gun in proportion to its greater caliber, it is fully as accurate as the .38 Special. In reloading, one one-thousandth of an inch is quite a bit in the .38, but does not amount to as much in the .44.

I have tried about every available .44 Special bullet for long-range work, finally designing one to suit myself, that has given the best results at long range of any. This bullet has a hollow base, and thus retains the same length with the consequent long bearing on the lands of a much heavier bullet. It weighs 230 grains, and I use from 12 to 13 grains of No. 80 powder behind it. I have used as much as

14 grains, but that is an extreme load and not the best for the gun, as it is very hard on the cylinder bolts. Such loads of No. 80—namely, 13 to 13½ grains—develop close to, if not quite, 1,100 feet per second velocity, which makes a fine load for long range. The new Lyman catalogue illustrates this bullet. With this bullet and 12½ grains of No. 80, I have put four out of seven shots through a 5-gallon oil can at 200 yards, using my 5½-inch barrel slip gun—this from a seated, back rest position, and both hands. The other three shots landed very close. I have killed quite a number of jack rabbits with this outfit up to and including 150 yards. This bullet is the best killer from a six-gun that I have ever used. The big square point and the shoulder of the front band produce plenty of shock, and cut a large, full-calibered hole. This bullet is long and has a long point, while the heaviest portion of it is at about the middle of its length; hence its balance is similar to that of the Government boat-tail .30-caliber bullet. It would make a



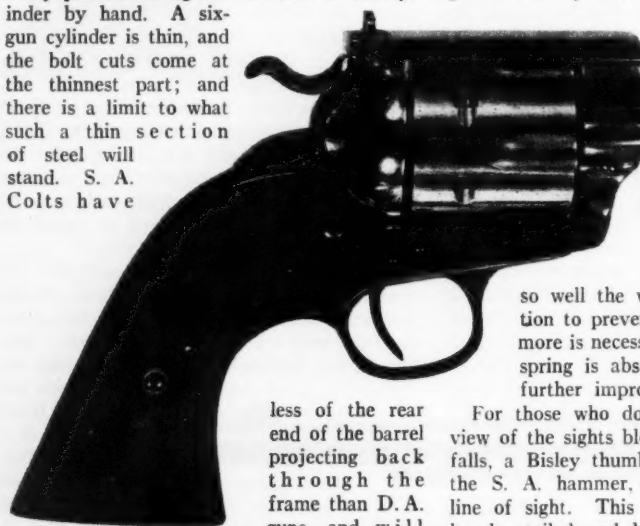
Three long-range six-guns belonging to the writer

I shot a lot of cartridges at the longer ranges for the number of hits made. The short-sight radius and low sights of this gun are a poor combination for such work. My gun jammed every few shots when I first got it, until we found the trouble. The recoil spring was too heavy, and the recoil of the cartridge insufficient to throw the slide far enough to the rear for the ejector to kick the empty shell out of the gun. Cutting off three coils of the recoil spring cured the trouble. The gun will still jam with the older .38 auto. ammunition, but the new Western and Remington function perfectly.

I found that the only clean kills I got with this gun on chucks were either head shots or full-length body shots; and in the case of some of the latter the animals were able to drag themselves for some distance. Many I shot broadside through the heart, and nearly always they would lie still a minute, then apparently recover and run away, or go down their holes, where I later found them, with

most efficient man-stopper. The same bullet in flat base weighs 250 grains. My object in designing this long-range bullet with a hollow base was to cut down the weight and consequent pressure without losing anything in bullet length and length of bearing on the lands. This bullet seats nearly flush with a S. & W. cylinder, and has less jump than any standard six-gun bullet. This, and the fact that it has a full-groove-diameter band in front of the crimping groove to line it up perfectly in the chamber throat before firing, are partly responsible for its accuracy. Doctor Murphy, of the Winnipeg Revolver Club, has made a 5-shot 20-yard possible with it in the flat-base type.

Six-gun bullets for long range and heavy loads should be cast quite hard—not less than one part tin to twelve parts of lead—and should be sized to not more than two-thousandths oversize. Better just one one-thousandth for maximum loads. Never shoot any six-gun with bullets larger than can be easily pushed through the mouths of the cylinder by hand. A six-gun cylinder is thin, and the bolt cuts come at the thinnest part; and there is a limit to what such a thin section of steel will stand. S. A. Colts have



less of the rear end of the barrel projecting back through the frame than D. A. guns, and will

stand heavier pressures.

Men who like the double-action gun have two excellent models to choose from. If they have very large hands, then the Colt New Service Target in .44 Special will make a most excellent long-range or target weapon. For those with smaller hands, who still prefer the D. A. gun, the S. & W. Military in .44 Special should suit. In the double-action class I personally believe there is nothing quite the equal of a fine old triple-lock Smith & Wesson Target. The New Service is a strong, rugged gun, and one that will stand harder usage* than the Smith & Wesson, but the latter possesses a much better system of locking the cylinder. The Colt sights are more durable. The Smith & Wesson rear target sight is not a very good sight for rough holster use, and is easily bent when elevated in the least. On the other hand, the elevation should be in the rear sight, as with the S. & W. A plain Call gold bead of about 1/12-inch, or even 1/10th, in width, with a few fine gold cross lines inlaid down the face of it and spaced about the same width apart

as the width of the bead itself, makes an excellent front sight for any work, though for a quick draw the blade should not be square on the face, as it tends to catch on the clothes. The square or under-cut face front sight is much the more accurate, however. Either Colt or Smith & Wesson double-action guns will do fine, accurate work at any range. Though I have seen several plain models of both Colt and Smith & Wesson guns that had to be worked over—sights not lined up and some with too much space between the cylinder and barrel—I have never encountered this trouble in the target models of either make.

I personally prefer the remodeled S. A. Colts for my own use, for self-defense, game killing, or long-range work. The grip fits my hand best of all the commercial grips. Another thing: I used one for a teething ring when an infant, then through my cow-punching days, until no other gun feels quite as good to me. I have yet to find any other gun that is any more accurate or reliable than

so well the working over of this action to prevent breakage that nothing more is necessary. The Newman mainspring is absolutely unbreakable, and further improves this action.

For those who do not like to have their view of the sights blotted out as the hammer falls, a Bisley thumb piece can be fitted to the S. A. hammer, and will be below the line of sight. This thumb piece can either be dovetailed and brazed, or welded on in place of the old high hammer spur. For my part, I like the Bisley-topped hammer; yet I can not help but think that for a purely fighting weapon that high hammer is hard to beat in a trigger gun. The slip hammer has it beaten, of course, for its special purpose. I have shot guns with both Bisley-topped hammers and standard S. A. hammers alternately, and really could not see any difference in the calling of my shots. What is the difference whether the falling hammer blots out your vision, or the recoil of the gun does so? I find that I can call my shots just as well one way as the other. For fast work the Bisley has a larger place for your thumb to strike, and is probably less apt to cause a fumble due to the size of the thumb piece; but the high hammer seems to help control the gun better, too, in some ways. It is mostly a matter of taste, like the Irishman's whisky.

I have tried all manner of shapes of pistol and six-gun grips, from the freak grips of the free pistols and the moulded plastic-wood grips that exactly fit every little line in your hand, down to the old S. A. Colt Dragoons.

I think Samuel Colt designed a far better gun and grip than he ever realized. The older I get and the more experience I have with all manner of different six-gun grips, the more love and respect I have for the S. A. Colt grip. Croft is the only man that has ever really improved this grip, which he did by combining a Bisley backstrap with an S. A. guard (see middle illustration of my guns, and second illustration of the two remodeled by O'Meara), bending the said Bisley backstrap and cutting it off to the same length and angle as that of the S. A. I persuaded him to add a little more flare at the bottom of the grip, so that it would fill the lower part of the hand better and make the gun point better from the hip.

For most work Croft's grip is a better grip than that of the standard S. A.; but for fast, self-defense work it is not any improvement whatever over the regular S. A. grip. This Croft grip does not allow the gun to turn up in the hand from recoil as far as does the regular grip; hence makes for slightly slower

Another long-range gun by O'Meara. This gun has the Croft grip

a properly-worked-over S. A. Colt. Mr. Hathaway described

second, third, or fourth shots. On the other hand, it distributes the weight of the gun a little more evenly over the hand, and holds a little steadier.

The very fact that the S. A. turns up so far in the hand protects the hand from the recoil, and places the hammer spur in easy reach of the thumb at the same time. The saw-handle type of grips are the worst offenders from recoil. There is one thing that will help the S. A. or any other grip, and that is carved ivory stocks, the carving to be right or left hand, according as the gun is used in the right or left hand. This carving fills the hollow of the hand as does one of old Wundhammer's pistol-grip stocks for the Springfield. It makes a very secure, comfortable grip.

Many six-guns and automatic pistols will do good shooting at close range but are hopeless at long range. There is no finer or more exacting test of a six-gun than long-range work. A couple of gunfals will show up the shortcomings or the possibilities of different bullets and loadings better than a box of loads fired at short range. It is really surprising how accurately a short gun will sometimes shoot at long range, even light-caliber guns. I remember shooting a little .22 Colt auto. at about 400 yards, at a piece of sheet iron measuring some 3 feet by 4 feet, on a still day; and after finding how much sight to hold up in the notch, with the front sight adjusted to give all the elevation possible, I had no trouble in keeping most of my shots on that piece of sheet iron. Believe it or not, a great many of those tiny pellets went through the metal even at that range.

(Continued on page 25)

The Thirty-Seventh Annual Sea Girt Interstate Tournament

By C. S. LANDIS

A SMALL BOY, dressed in a red jacket and shorts, carrying a Model 57 and a box of Kleanbore, strode energetically up the 50-yard firing line at Sea Girt. "Hurry up, Pop!" said he, "I want to get down on the line and make a monkey out of some of those men. They're missing their targets."

"S-s-s-h-h-h!" said his father; "that kind of talk don't go here. This is one of the fastest aggregations of small-bore shooters in the country. There's Eric Johnson, Charley Johnson, Eddie Doyle, who ran 200 straight bulls, and Held, and all the rest. Right now you're traveling in big company."

"Humph!" sniffed the youngest shooter on the grounds—after a critical examination of those on the line—"to me, none of them look so hot."

And he meant it. Full of courage the little fellow who had just arrived from a visit to Abercrombie & Fitch, took his place on the line, and accomplished more than some older shooters have been able to do, for he kept all of his shots on his own target paper.

It was blowing pretty hard when the boy arrived, but that was an exceptional day. The week of the Thirty-Seventh Annual Tournament was about all that anyone could ask of late September—cool, windy, pleasant; good shooting weather, and just tricky enough to keep a man's eye glued to the spotting scope. In both military rifle and small-bore, the Sea Girt shoot of 1930 was quite successful.

The mists had hardly cleared off the range Tuesday, September 16, when the first Springfield bellowed in the Eisner Match—10 shots standing and 10 kneeling, at 200 yards. Sergt. E. Donaldson, Company L, 113th Infantry, New Jersey National Guard, took this match with a 95. As there were no cash prizes, Corpl. J. H. Fitzgerald, of Company L, 107th, and Sergt. Walter Walsh,

Company I, 113th, each with 93, had to be content with the honors that go with second and third places.

Sergt. F. Pauch, who has a shooting wife, and doesn't need a new uniform, won the Meany Match at 500 yards, with 50 plus 39 bulls. That was good for \$6.60 and a medal. The wife probably has the \$6.60, but the Sergeant keeps the medal. A close second in the Meany was Sergeant Walsh, with 50 plus 35 bulls. And then we come down to Corporal Fitzgerald, who quit with an even 50. There were four 49's, topped by George Bergman.

The Regimental Team Match, known as the Interstate Regimental, was won by the 114th Infantry, N. J. N. G., with 747. They received medals for beating the 113th and the 107th.

While this was all going on along the military rifle front, over on the pistol range, where the black ducks breed and the wind blows in from the ocean, James O'Rourke, of the Neptune Police Department, was winning the Individual Police Pistol Match, with 239, just one point higher than A. Maskevich, of the Union County Police. F. T. Videus had three less. To the winner goes 90 cents and a medal.

Elizabeth, N. J., took the Police Team Match; but right behind them was Neptune, with 950, as compared to 955. Union County was right on the job with two teams, who took third and fourth.

One of the nicest money prizes fell to the lot of the New Jersey National Guard Team, who took \$100 and medals from the New Jersey State Rifle Team, the New York Stock Exchange Rifle Team, and the Pennsylvania National Guard Team, in the Dryden Trophy Team Match. Top score was 1,090, while 1,052 was good for second.

With the tournament well started they staged the Libbey Match at 1,100 yards. A medal and \$7.60 was the reward of Sergt. W. Walsh, who scored 65. Sergt. R. Ken-

dall was second, and Capt. R. H. Lummis, who has almost won more matches than Jack Sharkey, was third.

Walsh had another field day in the Swiss Match, taking that with 22 bulls. He also won the Governor's Champion Marksman Match with 245. And Sergt. S. Bartletti, of Company K, 113th Infantry, took the Hayes with 50, plus 20 bulls. Not since the World War have sergeants been so unpopular in the shooting game; but the corporals sort of evened matters up in the Sea Girt Championship, when Corpl. J. H. Fitzgerald, of Passaic, won with 192, 4 points more than was scored by N. Davids, of New York City. First prize was a medal and \$9.75.

The Spencer at 1,200 yards fell to another sergeant, S. Bartletti, Company K, 113th Infantry, N. J. N. G. Col. Billy Martin was second, with 1 point less—68 to 69—and M. W. Sargeant, of Montclair, who is not a sergeant but a manufacturer of chemicals, was third.

Turning to the small-bore, the Short-Range Match was the first single-entry competition—10 shots prone on the 5-bull target at 50 yards.

R. H. Nisbet, of South Kent, Conn., who is an artist when he isn't shooting, and a shooter when he isn't an artist, topped the list with 100, including 9 X's. Eddie Doyle had one less X, Frank Voran was third, and John Garrett fourth. There were six possibles. The others all won prizes. Papas had 99, and Walter Kelsey got 9 X's and a 9.

Eric Johnson recovered sufficiently from his four 99's at 200 yards, the day previously, to take the Eisner Small-Bore Match with a possible containing 6 X's. Frederick Pauch, of Somerville, let his group slide up a bit at 11 o'clock, and quit with a possible and 5 X's. Eddie Doyle and Charley Johnson each had 99, as did Col. Billy Martin, Sam Tekulsky, and



The 150- and 175-yard ranges in operation

J. M. Sorensen. But these all had fewer X's.

Clarence Held kept them there in the Long-Range Match to the tune of 195 x 200 on the decimal target. A beautiful 99 in a strong wind closed this score. Sam Tekulsky had 193, Sorensen 192, and John Garrett 188—principally because he accidentally fired one up in the air. Tekulsky had 98 for his first 10 shots, this with Held's 99 being the best shooting in a hard right wind.

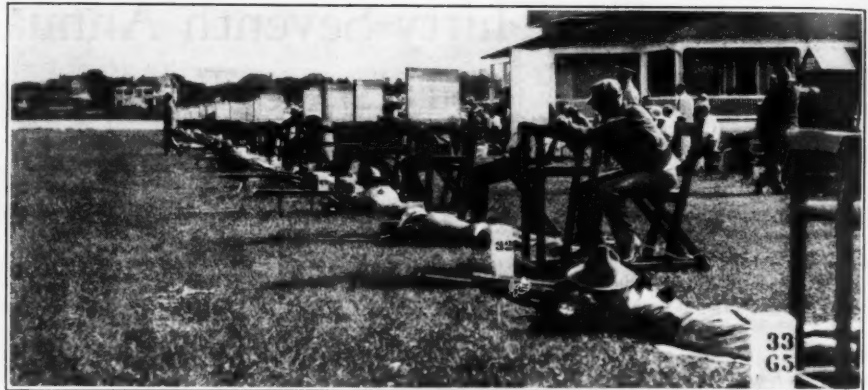
That brings us around to the next morning, and the Sea Girt Small-Bore Championship. Charley Johnson, who was the winner last year, was on hand, but said he didn't feel well. Whenever Charley doesn't feel well on the firing line the others soon feel worse; but after shooting a possible at 50, and a 99 at 100, Charles unexpectedly encountered a switch in the wind which gave him an 8. He risked another, and got it—to prove that he was guessing them wrong; and that landed C. H. in fourth place, just one under the gold medals. Charley won this match in 1922 and in 1929, and took fourth in 1927 and 1930; and, as I recall, third on one other occasion.

John W. Garrett, from North Plainfield, N. J., who had been shooting like a streak and had totaled 997 x 1,000 at 50 yards just before the competitions, came through in the championship to win with a possible at 50, 98 at 100, and a fine 99 at 200, when it was very windy. Walter Kelsey had 296 for second, Clarence Held 295 to outrank C. H. Johnson, and Russell Parry was fifth. Eddie Doyle had beautiful possibles at 50 and 100 yards—the best that came into the range house—but something happened to Edward at 200 yards. Garrett, Kelsey, and Held all received fine gold medals.

The Roosevelt Rifle Club of New York, whose team was composed of Walter Kelsey, Eric Johnson, Frank Yoran, and Sam Tekulsky, won the Dryden Team Match—10 shots per man on the decimal target at 150, 175, and 200 yards. Their score was 1,154. Frankford Arsenal was second with 1,152, and Perth Amboy third with 1,151. On the C5 target these boys would have been so closely tied that they would still be arguing as to who won. That's one advantage of using the decimal target: You seldom have a tie or a fight.

Sam Tekulsky unlimbered the heavy artillery in the Dryden Individual Match, which was put on promptly after having been left out of the program because of a feared lack of time, and Sam came through with 293 x 300. He had 99's at 150 and 175 yards. J. M. Sorensen, who usually manages to win a match or so, was second, with 291; Eric Johnson had the same score, and so had Clarence Held. Charley Johnson and Len Miller each had 290.

Having formed the habit, Sam Tekulsky also won the Swiss, with 26 bulls on the C5



Back at 200 yards, where the wind blows and the boys have to hold close to score 10's

target. George Sittler suddenly discovered that he was at a shooting match, and ran 20; Eric Johnson had 17 before he let one slip, while Marlin Kemmerer and Floyd Oswald upheld the sacred honor of Germansville with 14 each. Charley German was unlucky; he had 13. So had Clarence Held.

The Re-Entry Matches were another case of "too much Johnson"; Eric Johnson, this time. Eric won the 200-Yard Re-Entry by making four 99's and four 97's, but he didn't need more than three 99's to make the top score of 297. John Garrett was second with 295. He had a fine possible, the only one scored at 200 yards in the competitions.

In the 100-Yard Re-Entry Eric Johnson and John Garrett each had three possibles—and they were *tight* ones. Sam Tekulsky and Eddie Doyle each had 299.

In the 50-Yard Re-Entry Eric Johnson, John Garrett, Charley Johnson, Sam Tekulsky, and George Sittler each had three or more possibles, and divided the coin for the first five places.

There was wild excitement in the statistical office when a 100-yard re-entry target came in with five 10's on it, and nothing else. So a select committee of one interviewed R. H. Nisbet, the unfortunate, to discover his alibi, and incidentally to discover what caused a man to become disgusted and quit after he had five 10's. This is the alibi: "I figured that a man had only so many 10's in his system at once, and I wanted to put them on my record target in the Sea Girt Championship. I was absolutely right. I made a 9 on my first shot for record."

He was honest, anyway, because he didn't go back and put five more shots on the sighter after shooting his record.

And now a word about what the winners shot:

R. H. Nisbet won the Short-Range Match with a standard-weight Winchester Model 52, and U. S. Eric Johnson won the Eisner with a heavy-barreled 52, and Precision 5-Star. Clarence Held shot a heavy-barreled 52 and Precision to cop the Long-Range Match. John Garrett won the Sea Girt Small-Bore Championship using a Hubalek heavy-barrel Martini, and Precision 5-Star.

Sam Tekulsky was high shooter in the Dryden Individual, using Precision in a Winchester single-shot fitted with a Pope barrel. Sam also won the Swiss with the same combination.

In the 200-Yard Re-Entry, Eric Johnson shot his Winchester combination, while Garrett had his Hubalek-Martini and Winchester Precision. This pair also were the high men in the 100-Yard Re-Entry. In the 50-Yard Re-Entry there were five possibles of 300. Eric shot Winchester and Winchester Precision; Garrett, Hubalek-Martini and Winchester Precision; Charles Johnson a Hubalek-Ballard and Precision; Sam Tekulsky a Pope-Winchester and U. S., and George Sittler a heavy-barrel 52 and Precision.

In the team match, Roosevelt Club used two Ballards with heavy barrels, a Pope-Winchester, and a heavy-barrel 52. All four shot Precision.

In the way of high scores, there were about 18 possibles at 100 yards which came into the statistical office, most of these being very closely grouped and well-centered. There was but one scratchy shot in the eighteen groups. There was one 100, five 99's, and several 98's on the decimal target at 200 yards. Clarence Held also had a possible at 175 yards. J. M. Sorensen had a score of 100 at 150 yards on the decimal target. Considering the strong wind most of the time, this was very good shooting.

The committee on arrangements for the Sea Girt shoot of 1931 decided after a lengthy meeting that next year they would hold the military matches from June 22 to 27, and it is expected that an efficient detail from the regular services will be on hand to man the targets and the score boards. Also, the Tenth Annual Eastern Small-Bore Tournament will follow just a few days afterward, over the Fourth of July. And it is quite probable that a three-day Small-Bore Tournament will be held as in previous years over Labor Day. So there you are—no conflict with the National Matches, and the small-bore shooters can have their regu-

(Continued on page 23)

A Rifle Miscellany

By CHAS. ASKINS

I HAVE always had considerable faith in the theoretical energy that is a direct result of high velocity. When I took a glance at rifle ballistics and noted that a certain rifle had a muzzle energy of a ton and a half, my conclusion was likely to be that this rifle would kill any kind of big game found in America; no if's, doubts, or but's.

My friend Roy Riggs is a pronounced skeptic on the subject of the killing qualities of light bullets at high velocity. Without arguing the point, I always had a notion that heavy bullets at low velocity were just a fad of his. In the last year or two my faith in theoretical energy has been considerably disturbed.

I read recently, in *Outdoor Life*, I think, an account of big-game shooting in Africa by Leslie Simpson. He was shooting a certain antelope—maybe roan—with a certain rifle, which I recall as a .375. He had to shoot game to feed the safari; and from some cause, injury or bad health, was unable to get out of camp. But the antelope had the habit of coming to a certain spot within 300 yards. Mr. Simpson had a target put up on the favorite "using" ground of the game, and sighted his rifle on it. Now this rifle had been killing the antelope pretty well when Mr. Simpson had stalked to within easy range, but no bullet had ever passed through the big beasts, and few of them were dropped in their tracks. Shooting at 300 yards, from a sitting position in front of his tent, he knocked down an antelope. When the blacks brought in the beast the hunter wanted to see the bullet, as usual, but the nigger told him there was no bullet—it had gone on through. This happened a number of times, and no bullet stayed in a beast or failed to kill him. I am just quoting Mr. Simpson from memory, and it is not a very good memory, either.

About two years ago I fired a .276 rifle at a locust tree in the yard, shooting two shots from 300 yards. The bullet was a 175-grain Western boat-tail; the tree was 20 inches in diameter; bullet velocity calculated to be 2,500 feet at the muzzle. The results scared me, for both bullets went through and knocked off a slab of wood weighing a pound. Just recently I shot at that tree again with the same bullet, but this time at short range, muzzle velocity 2,800 feet; and all that showed was a little hole where the bullet went in. Of course that was wood, and we all know about penetration in wood.

Last year my son was a forest ranger in New Mexico. Orders came to decimate the herds of wild horses which had become so numerous that they were taking the grass which should have been eaten by cattle. The boy had a .30-06 180-grain rifle, a .250 Savage, and a Model 95 Winchester shooting the Krag cartridge, 220-grain. The .250 would kill a horse sometimes, by dint of

shooting him; the .30-180 would kill a horse, but he'd run and might have to be shot again—no bullet ever went through him, even through the neck. The Krag was odds the best horse-killer, and might drive a bullet through him, or nearly through. The energy of the .30-06 180-grain was around 3,000 foot-pounds; that of the Krag 220-grain around 2,000 foot-pounds. I shot some horses with a 175-grain 7-mm. bullet at a muzzle velocity of 2,850 feet; muzzle energy 3,150 foot-pounds. No bullet went through a horse, or much more than halfway through. No horse was knocked off his feet or killed in his tracks. All ran from a few yards to a hundred before falling. No horse bled, except at the nose and ears, after falling. My conclusion was that had I been shooting at a brown bear, charging, I'd sure have been obliged to do some more shooting.

Now a horse is not a game animal—not in the nature of big game, I mean. Shooting one of these fine beasts shocks a man if he has any finer sensibilities, and I mean never to shoot another; but they taught me something about big-game rifles. We all know what a Savage .250 will do to deer, usually stopping him right in his tracks. A .30-06 180-grain will kill deer, and the only criticism is that it wastes a lot of meat. A 7-mm. 175-grain bullet at 2,850 feet would probably cut a deer half in two, yet none of these bullets proved satisfactory to me when it came to shooting through nearly 2 feet of solid bone and muscle of a horse's shoulder. If they won't kill a horse in his tracks, then will they drop dangerous big game in its tracks? I doubt it.

It appears to be pretty much a question of adapting a bullet in weight and jacket to the work it has to perform. If the bullet won't do its best work, for our purpose, until it has traveled 300 yards, that is something to be considered. A .25-20 Hi-Speed bullet will tear a jack rabbit nearly in two; but shoot that same bullet into a deer, and it will merely sting him, making a barely perceptible hole. I shot a coyote with a certain rifle, hitting him in the flank, tearing out the whole of the beast from the backbone on down. Shot the same bullet into the shoulder of a big buck at 50 yards, and he went off as if the devil were after him, and had to be tracked a half day before he could be finished. I have a sort of half-baked conviction that the rifle that is extremely deadly on deer—that, in fact, makes a horrible wound—is not at all adapted to shooting beasts three times the size of a deer. The fact that a bullet vents its "spleen" within a few inches of where it enters is of itself sufficient to condemn that bullet for the real thing in big game.

I have been going along with the school that holds that when a bullet enters a beast and expends all its energy inside of him, nothing more is to be desired. If the animal

were not killed, then the energy was not sufficient, and the simplest way of raising the energy was to raise the velocity. But does that work? Not always. Yet nobody ever did think, or at least he never expressed the opinion, that a bullet of less potential energy might have been perfectly effective.

I recall an account by a German—a Captain Kleinschmidt—of his big-game shooting in Alaska, where he shot all kinds of game, including brown bear and moose. His rifle was a 6.5-mm. Mannlicher, weight of bullet 160 grains, energy under 1,800 foot-pounds, and yet he made no complaint whatever regarding the deadliness of his arm on the bears or anything else. Reduce the weight of that bullet to 120 grains, and raise the velocity until the energy figures read a thousand pounds more, and what would have happened to the bears? Something would have happened to the bears or the man who shot at them, and I don't know which. It is a well-known fact that the 7-mm. Mauser, 175-grain bullet, at a velocity of 2,350 feet, has always been a splendid big-game killer, even on elephants, with a solid bullet. The energy is about 2,150 foot-pounds. Now use the 139-grain bullet at 3,000 feet, energy around 2,800 foot-pounds, and the rifle is no good for anything larger than deer.

Of course what apparently is needed is bullet weight, and the penetration that is guaranteed by that weight. Again quoting Mr. Riggs, he has suggested that probably in time to come, if we keep on increasing bullet velocities, we will have to use solid bullets on big game, with some modification of the jacket at the point or elsewhere. We have all been afraid of solid bullets, and, as a matter of fact, we have all been afraid of penetration. Let a man tell what he considers ideal penetration, and he will state that is where a bullet goes through the animal, lodging in the skin on the opposite side. He doesn't like to say that the bullet went entirely through, making a big hole on the opposite side, and going on, because he very well knows that the bullet would then be expending part of its energy after it got through. He is obsessed with the conviction that the missile must expend all of its energy within the beast, or else it is a defective bullet. Now, with some misgivings I question the wisdom of all this. I believe that if we could have a bullet which would pass entirely through the game—a brown bear, say—and make a hole on the other side as big as your two fists, we'd get that bear. Same thing with anything else we shot.

I am beginning to believe that I need that hole where the bullet comes out. I have shot deer pretty extensively, and have lost some with a fatal wound that wouldn't bleed. Shoot a deer or anything else, and the place where the bullet entered may be closed up by the hide shifting. Now the beast is

bleeding inside, but if none of his motor muscles are injured, he will run and run fast until ready to drop dead, and there won't be a drop of blood on either side. The woods may be rank, the ground hard, and you can't track him—lost deer. But make a hole on the opposite side half as big as the crown of your hat, and I don't care whether the potential energy was 1,500 foot-pounds or 2,500, you will get that deer.

The modern tendency in cartridge building is to leave the bullets as they are and to speed them up. The bullet that was designed, and well designed, for a velocity of 2,300 feet is speeded up to a velocity of 2,800 feet, with no change in the bullet jacket. I question the wisdom of this, and question whether the high-velocity bullet is going to prove a better killer than the same missile at lower velocity. In like manner—still worse and more of it—bullet speed has been attained by lightening the missile. This has been done with the .30-06, the 7-mm., the .256, and the .250, and the results are in grave doubt where animals are to be shot above a certain size. In very large game shooting I'd far rather trust the 220-grain in .30-06, the 175-grain in 7-mm., the 160-grain in .256, the 117-grain in .250, the 350-grain in .375, to any of the lighter missiles that are made for these calibers. The thing lies partly in weight of lead, but still more in keeping the speed of the bullet down to its working velocity. If a man could run like a grayhound, but was sure to tumble heels over head before he got halfway out, it's darn few races he'd win.

The other way out, if it is not desirable to reduce velocities and energies by way of getting a working penetration—and I do not like the idea of that myself—is to strengthen the jackets until the bullets will stand up under the impact—not impact on small beasts, but impact on big beasts. Some attempt has been made to do this, and more attempts will follow. The Western Cartridge Co. has developed a deer cartridge which is intended to drive a bullet through a deer and bleed him on both sides. The Western Tool and Copper Co. makes bullets that are known to be hard to expand or uncertain about upsetting at ordinary velocities; but drive those bullets fast enough, as in the new .276 rifle, and they are it.

THE HALGAR RIFLE

I have read all about the Halgar rifle in *THE RIFLEMAN* and in *Army Ordnance*. A couple of years ago I had a pretty extensive correspondence with Mr. Gerlich concerning this rifle. He sent me dummy cartridges, bullets, and empty shells, and these looked right to me. Fact is, those were the finest looking boat-tail bullets that I have ever seen. Mr. Gerlich offered to send me a rifle for testing purposes. His claim was that the rifle would readily stay in the standard 30-inch bull at 1,500 meters. Because I am not a good enough military shot to do the rifle justice, and because of the trouble I knew would be in store for me in getting the gun through the

customs, I suggested that the Halgar company send the gun to Maj. John Hession, New York City. I turned the correspondence over to Major Hession.

The plan was to have the Major shoot the Halgar rifle at Camp Perry or Sea Girt, at 1,500 yards, against our fellows with the Springfield at 1,000 yards. The belief was that the difference of 500 yards would just about equalize the two rifles, and the Major might create considerable disturbance while demonstrating the superiority of the Halgar. I had a sort of secret belief that after trying the rifle at 1,500 yards against the Springfield at 1,000, Major John would presently move up to the thousand-yard mark himself, and then have the tar licked out of him. Nothing came of that plan.

Now I have never had any more doubt concerning German ballistic figures than I have of our own. However, my friend Capt. E. C. Crossman seems a bit skeptical, as others might be, and therefore I hope this rifle gets a military try-out at Camp Perry or elsewhere. Also, it would be well to have the cartridge chronographed by the du Pont company. If that 180-grain bullet can be driven at a velocity of better than 3,000 feet, without raising breech pressure beyond 52,000 pounds, then the German powder must be superior to ours, which would interest the du Ponts.

I noticed in the A. G. Parker & Co., Ltd., catalogue, as issued at Birmingham, England, that this company sells the Halgar rifle. The price is nearly \$300. Add our custom duty to this and the rifle would cost around \$450 in this country. That lets me out; and I wouldn't be willing to pay duty on it if the weapon came as a gift.

It may not be generally known that we have a nearly similar rifle in this country—the Dubiel. The Dubiel .276 has very much the same shape of case as the Halgar .280. The bullet is nearly the same size, though one is called a .276 and the other a .280. The Dubiel case has a double base-bearing band, which eliminates any question of head space, the same as the Halgar, and the taper of the two shells is about the same, the Dubiel case having a little longer shoulder taper. The Halgar case holds a little more powder, and the Halgar bullet is a better one than any we have in 7-mm. However, the Dubiel case holds more powder than we dare to use back of a 175-grain bullet, and was given the preference over the Holland & Holland .300 Magnum case for this reason. A case that can not be pretty well filled with powder when loaded will vary more in velocities from shot to shot than one with less air space. The velocity of the .276-175 Dubiel is given at 2,850 feet; that of the Halgar at 3,000 feet with 180-grain bullet. Only breech pressure stops the Dubiel from being raised to 3,000 feet. Breech pressure we will have with us always, and it doesn't matter the powder capacity of the case. There was the trouble with the .256. The case would hold powder enough to raise the velocity to 3,000

feet, and in practice it had to be kept down to about 2,750 feet.

As to the accuracy of the two rifles, the Halgar may have the advantage, because of the bullet and the character of the powder, but the Dubiel rifle was tested by Colonel Whelen at Springfield Armory, and at 200 meters shot three groups none of which ran above 3 inches. The Western Cartridge Co. shot the gun from machine rest at 500 yards, the 10-shot groups running from 4 to 5 inches. I doubt if the Dubiel rifle would shoot half-inch groups at 100 yards, which the Halgar seems to have done; but the Dubiel rifle has shot inch groups at that distance, which bears out the contention of the maker that the groups will spread no more than an inch to the hundred yards.

TRIGGER-PULLS

This last little essay, on trigger-pulls, is of minor importance. Most riflemen will not agree with me, and the majority is more apt to be right than a minority of one. At that, I have been shooting a rifle a long time, and hold tenaciously to my own convictions.

I noticed that the latest model of Remington '06 had come out with a take-up trigger. I can shoot that pull, but I don't like it, having a plain trigger on my old Model '06 Remington which I like much better. Once upon a time I was on a deer stand, and of a sudden a big buck was coming straight for me, and close. The trigger-pull was too light, or I took up too fast for my then frame of mind, and off went the rifle on the take-up—and off went the deer into the brush. Of course he wasn't hit, but I was—with the conviction that take-up pulls were not right for me in deer-shooting.

The rifle in question was a 7-mm., based upon the Mauser action, and everybody said the trigger-pull couldn't be changed to a plain pull. However, I took the rifle down to "John," and he did change it. He kept working on it, and it didn't take him very long, either, until the trigger yielded with a brittle snap, time after time, every time at $2\frac{3}{4}$ pounds, without an iota of drag or take-up. I have since shot that rifle a great deal, and the trigger invariably yields at exactly the same pressure; invariably, and no change whatever has taken place in the months that I have been shooting it. That pull is fine with a scope sight, just as good as a fine set trigger, and my offhand shooting with scope sight has been much improved. By the way, I shot a scope-sighted rifle, Mogg scope, 10-power, for a number of years, about thirty years ago, and without a fine double set trigger I never could have shot nearly so well in the offhand at either game or target. With that scope, mounted on a big Pope-Ballard rifle weighing 16 pounds, I shot 46 successive bulls, 8-inch, at 200 yards, offhand. Now beat that for a big yarn.

Naturally, using these high-power scopes. I had to learn to let-off when the cork bobbed under. Never could learn that trigger-squeeze

(Continued on page 24)

SEA GIRT INTERSTATE TOURNAMENT

(Continued from page 20)

lar fall shoot if they want it badly enough to say so.

General Spencer was on hand as usual this year. Quite a bit of water has flowed under the bridge since the General first began to stage the Sea Girt Tournaments, but the spirit is still as strong as ever, and at the age of 84 he has been re-elected for his fifty-second consecutive term as President of the New Jersey State Fireman's Association.

Scores follow:

EISNER MATCH

No.	Name and organization	Score
1.	Sgt. E. Donaldson, Co. I, 113th Inf., N. J.	95
2.	Corp. J. H. Fitzgerald, Co. L, 107th Inf., N. Y.	93
3.	Sgt. Walter Walsh, Co. I, 113th Inf., N. J.	93
4.	Sgt. F. Pauch, Co. B, 114th Inf., N. J.	92
5.	Sgt. S. Bartelletti, Co. K, 113th Inf., N. J.	90

* Prize, Eisner uniform.

MEANY MATCH

No.	Name and organization	500	Prize
1.	Sgt. F. Pauch, Co. B, 114th Inf.	50	*\$6.60
2.	Sgt. W. Walsh, Co. I, 113th Inf., N. J.	50	5.50
3.	Corp. J. H. Fitzgerald, Co. L, 107th Inf., N. Y.	50	4.40
4.	G. S. Bergman, Old Guard, N. Y.	49	3.30
5.	Sgt. T. A. Moore, Co. K, 107th Inf., N. Y.	49	2.20

* Also medal.

INTERSTATE REGIMENTAL TEAM MATCH

No.	Name and organization	200	600	1,000	Total
1.	114th Inf., N. J. N. G.	229	267	251	747
2.	113th Inf., N. J. N. G.	233	265	228	726
3.	107th Inf., N. Y. N. G.	226	266	222	714

* Medals.

INDIVIDUAL POLICE PISTOL MATCH

No.	Name	Score
1.	James O'Rourke (Neptune Police Dept.)	* 239
2.	A. Maskevich (Union County Park Police) †	238
3.	F. T. Vidusev	235
4.	J. M. Tierney	231
5.	Robt. R. Applegate	229
6.	E. L. Ettel	228
7.	J. J. Regan	220
8.	Chief L. Parks	208
9.	Sgt. N. F. Gibbs	194
10.	W. D. Haesly	190

* 90 cents and medal. † 60 cents.

POLICE PISTOL TEAM

No.	Organization	Score
1.	Elizabeth, N. J., Police Team *	955
2.	Neptune Police Dept. Team †	950
3.	Union County Park Police Team, No. 1	935
4.	Union County Park Police Team, No. 2	874
5.	Newark Police Team, No. 1	684
6.	Newark Police Team, No. 2	629

* \$1.80 and medals. † \$1.20.

DRYDEN TROPHY MATCH

No.	Organization	200	600	1,000	Total	Prize
1.	N. Y. N. G.	361	369	360	1,090	*\$100
2.	N. J. State Rifle Team	347	362	343	1,052	75
3.	N. Y. Stock Exchange R. C.	336	368	311	1,015	50
4.	Pa. N. G.	345	359	310	1,014	25

* Also medals.

LIBBEY TROPHY MATCH

No.	Name and organization	1,100	Prize
1.	Sgt. W. Walsh, Co. I, 113th Inf., N. J.	65	*\$7.60
2.	Sgt. J. Kendall, Co. F, 114th Inf., N. J.	64	5.70
3.	Capt. R. H. Lummis, Old Guard, N. Y.	64	3.80
4.	Capt. F. Hartleroad, Co. F, 114th Inf., N. J.	63	1.90
5.	Sgt. C. Curtis, Co. I, 113th Inf., N. J.	62	

* Also medal.

CAVALRY TEAM MATCH

No.	Organization	200	600	Total	Prize
1.	2nd Troop, Phila. City Cav.	174	181	355	*\$2.25
2.	Troop B, 102d Cav., N. J. N. G.	172	177	349	1.00

* Also medals.

COMPANY TEAM MATCH

No.	Organization	200	600	Total	Prize
1.	2nd Troop, Phila. City Cav.	163	186	349	*\$5.00
2.	Co. I, 113th Inf., N. J. N. G.	168	180	348	3.20
3.	Company F, 114th Inf., N. J. N. G.	164	163	327	...
4.	Company C, 104th Eng., N. J. N. G.	132	154	286	...

* Also medals.

SWISS MATCH

No.	Name and organization	500	Prize
1.	Sgt. W. Walsh, Co. I, 113th Inf., N. J.	22 Bulls	*\$6.00
2.	Sgt. R. L. Deverall, 1973 231st St., Brooklyn, N. Y.	13 Bulls	* 5.00
3.	Col. Wm. B. Martin, Dept. Rifle Practice, N. J.	11 Bulls	3.50
4.	Sgt. S. Bartelletti, Co. K, 113th Inf., N. J.	11 Bulls	3.50
5.	Sgt. J. Kendall, Co. F, 113th Inf., N. J.	8 Bulls	2.00

* Also medallion.

HAYES MATCH

No.	Name and organization	600	Prize
1.	Sgt. S. Bartelletti, Co. K, 113th Inf., N. J.	50 (20 bulls)	*\$9.00
2.	Corp. James H. Fitzgerald, 107th Inf., N. Y.	50 (19 bulls)	7.20
3.	Capt. R. H. Lummis, 71st Regt., N. Y. Vets. Assn.	49	5.40
4.	G. T. Kelly, 107th Inf., N. Y.	49	3.24
5.	Capt. F. Hartleroad, Co. F, 114th Inf., N. J.	49	2.16
6.	Sgt. R. H. Deverall, 107th Inf., N. Y.	49	1.80
7.	A. F. Trapper, East Orange Rifle Club	49	1.80
8.	1st Sgt. F. Pauch, Co. B, 114th Inf., N. J.	48	1.80
9.	Reese T. Davis, Unattached	47	1.80
10.	Corp. A. F. Hermann, 107th Inf., N. Y.	47	1.80

* Also medal.

SEA GIRT PISTOL CHAMPIONSHIP MATCH

No.	Name and address	Score
1.	Capt. H. H. Amundson, Plainfield, N. J.	181
2.	Capt. R. H. Lummis, Plainfield Shooting Club	173
3.	L. F. Page, East Orange Rifle Club	163
4.	Leonard Love, Arnold Service Corp., N. Y.	141
5.	Sgt. Walter Walsh, N. J.	141

* Prize, medal.

SEA GIRT CHAMPIONSHIP

No.	Name and address	200	600	900	1,200	Total	Prize
1.	Corp. J. H. Fitzgerald, Passaic, N. J.	48	49	50	45	192	*\$9.75
2.	N. Davids, New York City	45	50	47	44	186	8.13
3.	Wm. B. Martin, Elizabeth, N. J.	47	49	45	43	184	6.50
4.	Sgt. R. L. Deverall, New York, N. Y.	42	50	47	40	179	3.25
5.	M. A. Jury, Newark, N. J.	46	45	42	40	173	3.25
6.	Capt. F. E. Rosbach, Jamaica, N. Y.	41	50	40	40	171	1.62

* Also medal.

THE SPENCER MATCH

No.	Name and organization	1,200	Prize
1.	Sgt. S. Bartelletti, Co. K, 113th Inf., N. J.	69	*\$7.20
2.	Col. Wm. B. Martin, Dept. Rifle Practice, N. J. N. G.	68	6.00
3.	M. W. Sargeant, Montclair R. C.	68	4.80
4.	Chas. H. Johnson, Upper Darby, Pa.	61	3.60
5.	Reese T. Davis, Summit, N. J.	54	2.40

* Also medal.

COMPANY TEAM MATCH

No.	Organization	200
1.	Company I, 113th Inf., N. J. N. G.	1,196
2.	Company F, 114th Inf., N. J. N. G.	1,131
3.	Company C, 104th Eng., N. J. N. G.	1,093
4.	Company G, 113th Inf., N. J. N. G.	1,078
5.	Company A, 113th Inf., N. J. N. G.	1,000

* General Gillmore trophy and medals. † Capt. Y. T. Frazer trophy. ‡ General Spencer trophy.

SHORT-RANGE MATCH

No.	Name and address	50 Yards	Prize
1.	R. H. Nisbet, Kent, Conn.	100—9 X	\$2.85
2.	Edgar J. Doyle, New Haven, Conn.	100—8 X	2.37
3.	Frank L. Yoran, Tarrytown, N. Y.	100—6 X	1.90
4.	John W. Garrett, No. Plainfield, N. J.	100—4 X	1.19
	R. H. Betts, Glenside, Pa.	100—4 X	1.19

EISNER 100-YARD MATCH

No.	Name and address	100 Yards	Prize
1.	Eric Johnson, New Haven, Conn.	100—6 X	*\$3.30
2.	Frederick Pauch, Somerville, N. J.	100—5 X	2.73
3.	E. J. Doyle, New Haven, Conn.	99—6 X	1.92
	Chas. H. Johnson, Upper Darby, Pa.	99—6 X	1.92
5.	Col. Wm. B. Martin, Elizabeth, N. J.	99—4 X	1.10

* Also uniform.

SEA GIRT SMALL-BORE LONG-RANGE MATCH

No.	Name and address	200 Yards
1.	Clarence C. Held, Germansville, Pa.	195
2.	Samuel Tekulsky, 312 West 93rd St., New York, N. Y.	193
3.	J. M. Sorensen, 199 Amboy Ave., Metuchen, N. J.	192
4.	John W. Garrett, 229 Somerset St., No. Plainfield, N. J.	188
5.	Chas. H. Johnson, 28 Keystone Ave., Upper Darby, Pa.	188

* Gold medal.

SCORERS AND MARKERS MATCH

No.	Name	200 Yards	Prize
1.	Pvt. B. R. Hatfield, Ft. Pleasant, N. J.	48	*\$10
2.	Pvt. M. Gurriero, Co. A, 113th Inf., N. J. N. G.	47	† 6
3.	Sgt. A. Ross, 44 William St., Orange, N. J.	43	6
4.	Pvt. A. Magliaro, Co. A, 113th Inf., N. J. N. G.	42	5
5.	Pvt. M. Sorden, Jr., Co. A, 113th Inf., N. J. N. G.	42	5

* Gold medal.

† Silver medal.

VETERAN ORGANIZATION TEAM

No.	Organization	200
1.	71st Regiment Veterans Assn., N. Y.	294
2.	29th Division Association, A. E. F.	280

* Trophy.

REGIMENTAL TEAM MATCH

No.	Organization	200 slow	200 rapid	600	Total
1.	113th Inf. Regt. Team, N. J.	244	299	280	823
2.	114th Inf. Regt. Team, N. J.	230	290	258	778
3.	104th Engineers Team, N. J. N. G.	205	290	248	743
4.	104th Engineers Team, N. J. N. G., 2d Team	190	283	239	712

* Columbia trophy and medals. † Russell trophy and medals.

GOVERNOR'S CHAMPION MARKSMAN MATCH

No.	Name and organization	Slow fire	Rapid fire	Total
1.	W. Walsh, N. J. S. R. T.	146	99	245
2.	C. Curtis, N. J. S. R. T.	141	100	241
3.	S. Bartelletti, N. J. S. R. T.	142	99	241
4.	N. Donn, N. J. S. R. T.	140	99	239
5.	E. Sexton, N. J. S. R. T.	137	100	237
6.	E. Donaldson, N. J. S. R. T.	136	99	235
7.	T. A. Moore, Sgt. 107th N. Y. N. G.	140	94	234
8.	Sgt. N. Mayo, 104th Eng.	133	99	232
9.	Lt. Edw. Kelly, 104th Eng.	135	97	232
10.	A. DiBase, N. J. S. R. T.	135	97	232

* Governor's Champion marksman badge.

BOYLE TROPHY MATCH

No.	Name and organization	Score	Prize
1.	Sgt. F. Pauch, N. J. N. G.	150	*\$1.90
2.	G. H. Bergman, Old Guard, N. Y.	150	* 1.90
3.	J. H. Rackie, Frankford R. C.	150	1.90
4.	S. J. Bartelletti, N. J. N. G.	150	1.90
5.	J. M. Sorensen, Perth Amboy R. C.	150	1.90

* Also flag.

PISTOL MATCH—SCORERS AND MARKERS MATCH

No.	Name	Score	Prize
1.	Sgt. E. A. Hedman	174	\$10.00
2.	Pvt. B. Pearl	152	5.00
3.	Pvt. A. Mahon	138	2.00

SEA GIRT SMALL-BORE CHAMPIONSHIP

No.	Name and address	50 yards	100 yards	200 yards	Total
1.	John W. Garrett, No. Plainfield, N. J.	100	98	99	297
2.	Walter Kelsey, Tarrytown, N. Y.	100	99	97	296
3.	Clarence C. Held, Germansville, Pa.	98	99	98	295

* Medal.

(Continued on page 24)

INTO THE MOUNTAINS OF ALBERTA AFTER SHEEP AND GOAT

(Continued from page 13)

foot through brush, etc. Also because of slips and falls the scope is very liable to become damaged; and compared with a peep sight mounted close to the eye, I do not think the advantages of the scope will offset its disadvantages. I have also a .270 Winchester, Model 54, with the Lyman 48 on the receiver. While this arrangement is all right for target work, and also for slow and deliberate fire at game, I find that it is too slow for snap or quick shooting. Hence my preference for a sight (properly mounted) on the bolt, even though it is not quite so accurate.

I experimented this year with the 120-grain W. T. & C. hollow-point bullets, backed by 50 grains of du Pont No. 17½. This is very flat shooting, and dynamite on the smaller animals up to and including deer; but the light bullet loses velocity, and therefore lack-punch on heavy game at anything like long ranges. It is great coyote medicine, as my experience proves. I carry a .22 Smith & Wesson target revolver for keeping the pot supplied with partridge, grouse, rabbits, etc.; and it also often comes in handy for a finishing shot in the head on game which has been brought down, when a high-power load would spoil that much more meat. This little weapon is fine for amusement at the camp-fire tin-can competitions.

Belt axes and hunting knives I find very little use for outside of camp, and never carry them. I find a high-grade jackknife all that is required and much lighter to pack, even though a man should be forced to camp out under a tree. Dry branches can always be broken off for a camp fire, or larger sticks dragged up and burnt off.

The Wood's Arctic Down sleeping bag is well worth the price asked, in one trip alone, as it insures sleeping comfort in any weather. Here I use the largest size, so as to have lots of room, and use a single Hudson's Bay blanket doubled to sleep between, as it keeps the bed clean. In warmer weather I use the bag unbuttoned, giving more air and more room, while on cold nights it can be buttoned up, and is fit for any weather, even 40 below in a snow bank. While green boughs are fine under the bed, it takes time to prepare these, and a good air mattress is to be preferred for short camps. The weight is almost nothing.

For footgear I prefer high-cut, oil-tan leather boots, with good sole and heel thickly set with Hungarian nails, particularly in the instep, for negotiating down timber. These nails will prevent slipping on rocks, grassy slopes, etc., their only objection being that they are more noisy when approaching game on rock at short range, and greater care must be exercised than with rubber soles. The high-cut oil-tan boots may be heavier than some other types of footwear, still I am willing to carry them for the sake of dry feet in crossing mountain streams and wading through wet brush. Then, again, these boots prevent the pants legs from becoming caught on brush,

snags, etc., thereby preventing numerous falls. Also they protect your shin bones. Get your boots large enough to accommodate two pairs of heavy wool socks, and take along about six pairs of these. The outer sock will take care of perspiration and any outside moistures that may come in, and your feet will always be warm and dry, and never tired, sore, or chafed.

For pants, a good pair of heavy, tough closely woven wool with the bottoms staged so that they will fit inside the boots, will stand plenty of wear, will not snag easily, and are not noisy in the brush, besides being reasonably wind- and damp-proof.

Two suits of wool underwear will allow for a change; and I also don the two suits in bitter weather in the high country. When on the game trail I use a good woolen top shirt, and always carry slung on my back a short or stag shirt of the buckskin type, which comes in handy to slip on in case of rain or when lying on some windy point watching or waiting for game to move. I also use a heavy short Mackinaw for riding on the trail in cold or windy weather.

The saddle-horse outfit will always supply saddle slickers for rain. I always use a light, tough, close-fitting glove, as there is no doubt that a glove saves a lot of skin when climbing over rocks, etc. I use a reasonably thin glove as I never remove them in shooting.

The most useful hat in my estimation is the Stetson commonly worn by cowboys, guides, ranchers, etc., in the West. This will stand all kinds of hard wear, and is a protection for the face against the sun and wind, and will ward off branches when going through brush. Also, it will keep the rain from running down the back of your neck; or snow, should you be traveling through snow-laden evergreens, which are prone to dump their load of snow on you, the most of which seems to find its way down inside your shirt collar if you are wearing a cap. A warm cap with ear flaps, and a warm pair of mitts, are good things to take along, and also a light pair of shoes for use around camp at night. These three things do not take up much room but come in mighty handy at times.

For mountain use I never carry a compass, and never found any need for one. For binoculars I carry the 8-power Carl Zeiss glass with 30-mm. objective, and consider this to be the best all-around mountain glass. A good high-power spotting telescope with a tripod comes in handy for studying heads from extreme range. It will very often save miles of tramping to obtain a good view of heads, and also with the scope you will see heads that would otherwise be passed up. An instrument of this kind is heavy and awkward, and will be objected to by many on these grounds.

In the matter of cameras for camp scenes and general views, the postcard size with F 6.3 lens is as good as any, while for carrying on the game trail a good vest-pocket camera with at least F 6.3 lens will be handy for making close-ups of fallen game, etc. From these can be made good enlargements.

In setting down the incidents of the trip

above referred to I have omitted making any reference to the shooting of badgers, coyotes, and smaller game, and deer, which can be shot legally under special permit during the sheep and goat season. I saw great numbers of these while high up in the sheep country. Some had wonderful big heads; but I deliberately passed these up as I wished to avoid packing them with us on the horses, and also I wished to do my deer hunting close at home later on in the season, when all of the meat could be saved and made use of. In December I obtained a fine ten-point buck, only being out from the house less than three hours.

As I write these lines my thoughts go back to those thirty wonderful days spent close to mother nature in the Rockies last fall. I can still see in my mind's eye the huge towering peaks under that autumn haze, with the deer, the bands of sheep, and the goat, in their natural haunts; and also the deep, silent pools with the big rainbow trout lying at ease on the bottom or rising to my artificial flies, while the brown, red, and yellow poplar leaves came floating down; and I sincerely trust that this coming fall I will again be able to go back to these scenes of my dreams.

A RIFLE MISCELLANY

(Continued from page 22)

business to this day, except when I have some kind of a rest, sitting or prone. My system of offhand shooting is to come on to the bull, and put all the pressure on the trigger that I dare; now I transfer my focus from the sights to the point I mean to hit—don't watch the sight any more because I know where it is. The next time that sight comes on and gets between me and what I am looking at, bang goes the rifle; no squeeze and no delay whatever. Of course the sight warns me that it is coming on, and I can time the trigger to yield on a precise instant. But if I had to squeeze the trigger, after the sight was fair on, not knowing when the trigger would yield, the Lord knows what would happen. I have often envied the lads who can hold an offhand rifle, in a wind, squeezing a trigger and not knowing when the rifle is to fire, and still stay in the bull. I am too old to learn that; but have never seen anybody else who could do it, either.

SEA GIRT INTERSTATE TOURNAMENT

(Continued from page 23)

200-YARD, ANY-SIGHT MATCH, UNLIMITED RE-ENTRY

No.	Name and address	200 yards	Prize
1.	Eric Johnson, New Haven, Conn. . .	297	\$4.72
2.	John W. Garrett, No. Plainfield, N. J. . .	295	3.15

100-YARD, ANY-SIGHT MATCH, UNLIMITED RE-ENTRY

(116 Entries)

No.	Name and address	100 yards	Prize
1.	Eric Johnson, New Haven, Conn. . .	300	\$3.26
	John W. Garrett, No. Plainfield, N. J. . .	300	3.26
3.	Samuel Tekulsky, New York City . .	299	1.81
	E. J. Doyle, New Haven, Conn.	299	1.81
5.	F. Pauch, Somerville, N. J.	298	1.45
6.	Walter Kelsey, Tarrytown, N. Y. . .	297	1.45
	Chas. H. Johnson, Upper Darby, Pa. . .	297	1.45

50-YARD, ANY-SIGHT MATCH, UNLIMITED RE-ENTRY

(100 Entries)

No.	Name and address	50 yards	Price
1.	Eric Johnson, New Haven, Conn. . .	300	\$2.37
2.	John W. Garrett, No. Plainfield, N. J. . .	300	2.37
3.	Chas. Johnson, Upper Darby, Pa. . .	300	2.37
4.	S. Tekulsky, New York City . . .	300	2.37
5.	George Sittler, Germantown, Pa. . .	300	2.37
6.	H. P. Staats, So. Kent, Conn.	297	.63

SMALL-BORE DRYDEN TEAM MATCH

(10 shots per man at 150, 175, and 200 yards on the decimal target. 16 entries)

No.	Organization and address	150	175	200	Total
1.	Roosevelt Rifle Club, New York City:				
	Walter Kelsey	98	98	90	286
	Eric Johnson	98	99	94	291
	Frank Yoran	98	93	93	284
	Samuel Tekulsky	99	99	95	293
Total					1,154
					Total Price
2.	Frankford Arsenal R. C., Phila. . .				1,152 \$4.50
3.	Perth Amboy R. C., Perth Amboy . .				1,151 3.00
4.	N. J. Small Bore R. C., Sea Girt . .				1,136 1.50

* Bronze medals and \$6.

DRYDEN INDIVIDUAL MATCH

(10 shots per man at 150, 175, 200 yards on the decimal target. 20 entries)

No.	Name and address	150	175	200	Total	Price
1.	Samuel Tekulsky, New York City . .	99	99	95	293	\$3.00
2.	J. M. Sorensen, Perth Amboy	100	96	95	291	2.50
3.	Eric Johnson, New Haven, Conn. . .	98	99	94	291	2.00
4.	Clarence Held, Allentown, Pa. . .	97	100	94	291	1.50
5.	Chas. H. Johnson, Upper Darby, Pa. . .	99	96	95	290	1.00

THE SMALL-BORE SWISS MATCH

(200 Yards Miss-and-Out C5 target)

No.	Name and address	No. bulls	Price
1.	Samuel Tekulsky, New York, N. Y. . .	26	\$2.85
2.	Geo. H. Sitter, Germantown, Pa. . .	20	2.37
3.	Eric Johnson, New Haven, Conn. . .	17	1.90
4.	Marlin Kemmerer, Germantown, Pa. . .	14	1.19
5.	Floyd Oswald, New Tripoli, Pa. . .	14	1.19

SLOW-FIRE RE-ENTRY PISTOL MATCH

(Aggregate of five highest tickets to count)

No.	Name and address	Score	Total	Price
1.	Capt. R. H. Lummis, Roselle Park, N. J. . .	91 90 88 87 86	442	\$4.20
2.	H. W. Amundson, Plainfield S. C. . .	81 79 75 71 69	375	2.80

RAPID-FIRE RE-ENTRY PISTOL MATCH

(Aggregate of five highest tickets to count)

No.	Name and organization	Score	Total	Price
1.	Leonard Love, Arnold Service Corp., N. Y. . .	93 91 87 84 84	439	\$8.25
2.	H. W. Amundson, Plainfield S. C. . .	79 82 83 90 95	429	5.50

SIX-GUNS FOR LONG RANGE

(Continued from page 18)

While in Oregon I used to do a lot of shooting from the road across a wide gulch at an old well house about 4 feet high by 6 feet in width, made from inch lumber on each side. This at between 500 and 600 yards. I used my .44 Special and some .45 Colt guns; and after I found out how to hold each gun I hit the well house quite often. Except for a few of those bullets that struck the two-by-fours, all went clear through both sections of the wall. I am satisfied that it would have taken more than a heavy overcoat to have stopped any of them; and from the heavy, dull "thwack" they made on landing, I know they would have been hard on any man.

On different occasions I have done quite a bit of shooting at from 600 yards to half a mile with different six-guns. I believe that I can take a good gun that I am used to, and over dry, dusty ground, on still days, hit anything the size of a man on a horse before the gun is empty. My friend Croft has a remodeled Bisley with 3-inch barrel, if I remember aright, with which I had no trouble

in hitting a juniper tree about 4 x 4 feet at 700 yards. Hit it for every cylinderful I tried before the gun was empty. On one or two occasions, I hit it twice out of six shots with this short gun. I know many will brand me as a member of the Ananias club; but both Harold Croft, of Philadelphia, and J. Keefer, of Payette, Idaho, witnessed the shooting.

One thing I noticed when shooting the short-barrel guns at long range was that it seemingly took less front sight held up over the top of the notch than with the longer-barrel guns, due to the short sight radius; and a very little change in hold made a great difference in the elevation—this with heavy smokeless loads. With black-powder loads in a 2½-inch barrel .45 of Mr. Croft's I had an awful time hitting the tree, but finally did so on the eleventh shot, if I remember rightly, by holding on a sagebrush on top of the mountain in back of the tree. With the 4¾-inch and longer barrels, I hit said tree before the gun was empty.

Last winter H. W. Bradley, of Salmon, Idaho, and I were examining an old Manhattan cap-and-ball six-gun of his, and noticed that the gun had twelve bolt cuts in the cylinder, which could thus be locked between the charges, so that the gun could be carried safely with six charges. We, therefore, got the bright idea that the same thing would work in the S. A. Colt, and proceeded to try it. I then wrote friend Croft, and he rigged up some of his guns that way. There is now no need for anyone to kick on the S. A. being safe only when carried with five shells in the cylinder. There really is need for only one additional bolt cut to make the arm safe when carried with six shells. Either Bradley or O'Meara can fix any S. A. Colt this way at slight cost. So remodeled it is really safer than any of the D. A. guns.

Croft wrote me of an accident that happened in Philadelphia. A man carrying a triple-lock Smith & Wesson leaned across the desk to speak to the boss, and as he did so his gun slipped from the shoulder holster and fell on the cement floor. It fell in such a way that the hammer spur struck the floor, breaking the little safety lock and killing the boss. I know of a great many accidents occurring from having six shells in the S. A. A man named Murray, living near Boulder, Mont., lost his wife because of an S. A. falling and landing on the hammer spur. One of the Bradley boys, a local forest ranger, had hooked the stirrup over his saddle horn while saddling. The stirrup fell, striking the hammer spur of his S. A., which shot him in the leg.

I have known of several accidents from D. A. guns going off when carried loose in the pocket. I have a friend living in Baker, Oreg., with one leg gone below the knee because of a D. A. Colt somehow catching and going off in his pants pocket while he was working on a threshing outfit. All guns are safer in some kind of a holster, and I believe the extra bolt cut will make the S. A. guns about as safe as, or safer than, any other.

Ed McGivern, of Mantana, is now working with the S. A. guns and also with the slip

guns, in various calibers. He is without doubt one of the very fastest D. A. men in this country, and it will indeed be interesting to see what he can do with the slip gun in fast aerial work and hip shooting. He is another man that can do good, fast hip shooting and hitting on anything the size of a man up to 20 yards. He is now doing a lot of long-range shooting with various guns at the Colt man targets and other targets cut out of pasteboard. The Colt man target makes a most excellent object to shoot at, both at long range and for quick-draw hip shooting.

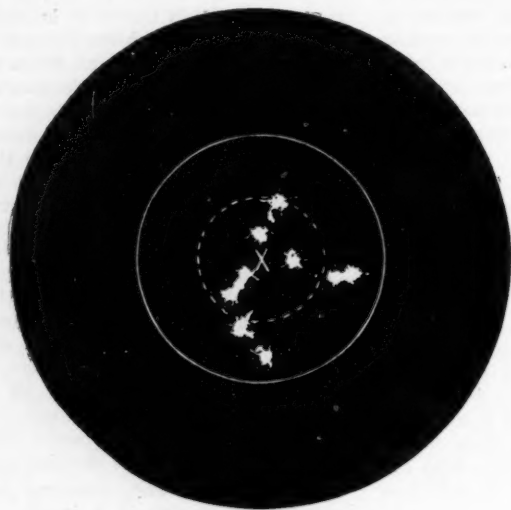
I have had a lot of queries from different individuals asking if the slip gun can be shot accurately on targets and game, or for long-range work. Properly handled the slip gun is just as accurate as any trigger gun. I have done fully as good shooting at all ranges with the slip gun as with the trigger gun. It requires practice, and more practice, the same as any other branch of the shooting game.

Two years ago, while punching cows, I jumped three coyotes in a bunch. I had ridden out on a point to look the gulch over for stray cattle, and of course the yellow dogs saw me at the same time I saw them. They were about 200 yards away when I fell off my nag and started shooting at them with a 5½-inch .44 Special slip gun. My first two shots landed behind and low on the one I was shooting at, so I held up and led him more. At the third shot I heard my 230-grain slug land. The coyote went down, but got up and went on out of the head of the gulch and over the hill, my two remaining shots failing to touch him. After reloading the slip gun, I forked my nag and went over the mountain in the general direction the coyote had taken. While working my way down a rocky coulee on the other side of the mountain, I found him still alive. The bullet had struck in front of the right hip and come out back of the left shoulder, tearing a 1-inch hole. Needless to say, such shots are more or less accidents. Still, and all in all, I have had several similar accidents. I have emptied my six-gun many times on much closer coyotes without hitting, but I get a great deal of enjoyment out of those occasional long-range shots that do land.

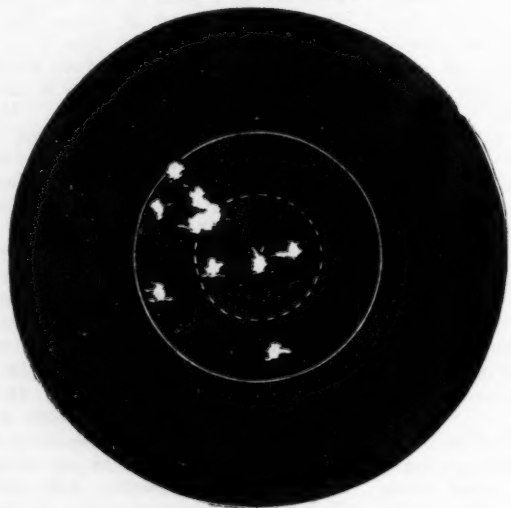
I remember emptying a .45 S. A. with Remington black-powder loads at a mountain goat at around 300 yards for the last shot or two. He was hobbling along on two good legs and the remains of two more that I had sent .45 Colts through. I had an ideal sitting position, with my back against a burned stump, and the gun in both hands between my knees. The ground had all been previously burned off, and snow had not yet fallen. I could plainly see every shot strike, from the spurt of ashes. I knocked the old billy down twice out of the six shots. After chasing him another mile I finally got enough lead into him to stop him. Out of ten shots that hit him, nine went clear through. I fired eighteen at him all told. The first shot was running, at around 40 yards.

A six-gun is not a big-game gun, and should never be used as such unless one has nothing better. Still, I have killed three deer, a goat and an elk with one.

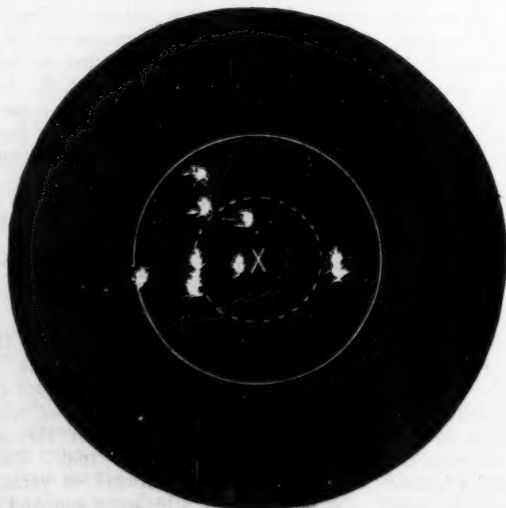
AGAIN AT SEA WINCHESTER PROVES ITS D



Target by E. J. Doyle



Target by Eric Johnson



Target by John W. Garrett

RIGHT on the heels of its smashing sweep of v Sea Girt Shoot which have made it the sensat again swept first place after first place in Master shooters in event after event again plied t uniformity of Winchester Precision.

And the records prove the soundness of their ju ship, the Long Range Match, the Eisner 100 yards Swiss, the 100 and 200-yard Reentry, first place Precision.

In fact, of the 49 shooters who captured the five matches and those who shot on the winning Dryd Precision and 30 used Winchester Rifles.

Targets shown on this page represent a few with Winchester Precision at Sea Girt. Re

Sea Girt Small-Bore Championship

1. John W. Garrett 297 x 300, Precision
3. Clarence Held 295 x 300, Precision
4. Charles Johnson 295 x 300, Precision
5. Russell N. Parry ... 294 x 300, Precision
6. Eric Johnson 294 x 300, Precision

Small-Bore Long-Range Match

1. Clarence Held 195 x 200, Precision
 4. John W. Garrett 188 x 200, Precision
 5. Charles Johnson 188 x 200, Precision
- Also 7th, 8th, 9th and 10th.

Small-Bore Dryden Team Match

1. Roosevelt R. C. 1,154 x 1,200
- All shot Precision.

Eisner 100-Yard M

1. Eric Johnson 100-
3. E. J. Doyle 99-
3. Charles Johnson 99-

100-Yard Re-Ent

1. Eric Johnson 300 x
1. John W. Garrett ... 300 x
3. E. J. Doyle 299 x

Small-Bore Swiss M

1. Samuel Tekulsky ... 26 B
 2. George Sittler 20 B
 3. Eric Johnson 17 B
- Also 4th, 5th, 6th and 7th

WINCH

TRADE MARK

Ask for folder on the new Five Star Precision - the finest o

WINCHESTER REPEATING ARMS COMPANY

SEA GIRT PRECISION DOMINANCE

sweep of victories at Camp Perry and the June
it the sensation of the year, Winchester Precision
t place in the September Sea Girt Tournament.
in placed their dependence on the accuracy and

ss of their judgment. In the Small-Bore Champion-
100 yards, the Dryden Individual, the Small-Bore
first place every time was won with Winchester

ured the five highest places in the nine individual
inning Dryden Match Team, 32 shot Winchester

present a few of the 100 yard targets shot
Sea Girt. Reproductions 3/4 actual size.

100-Yard Match

..... 100-6x's, Precision
..... 99-6x's, Precision
..... 99-6x's, Precision

100-Yard Re-Entry

..... 300 x 300, Precision
..... 300 x 300, Precision
..... 299 x 300, Precision

Small-Bore Swiss Match

..... 26 Bulls, Precision
..... 20 Bulls, Precision
..... 17 Bulls, Precision
5th, 6th and 7th.

Dryden Individual Small-Bore Match

1. Samuel Tekulsky ... 293 x 300, Precision
3. Eric Johnson 291 x 300, Precision
4. Clarence Held 291 x 300, Precision
5. Charles Johnson 290 x 300, Precision
6. L. J. Miller 290 x 300, Precision

200-Yard Re-Entry Match

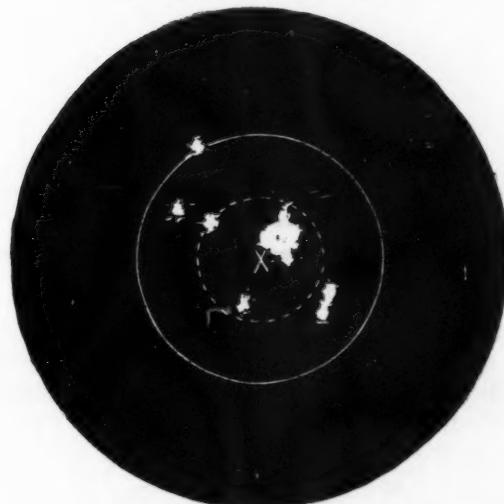
1. Eric Johnson 297 x 300, Precision
2. John W. Garrett 295 x 300, Precision

50-Yard Re-Entry

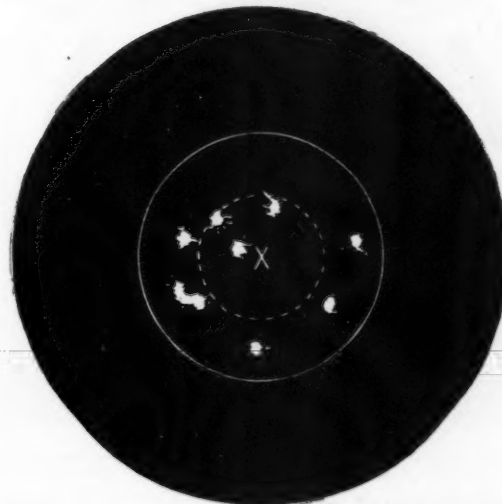
Four out of five who tied for first with
scores of 300 x 300, shot Precision.



Target by Charles Johnson



Target by John W. Garrett



Target by E. J. Doyle

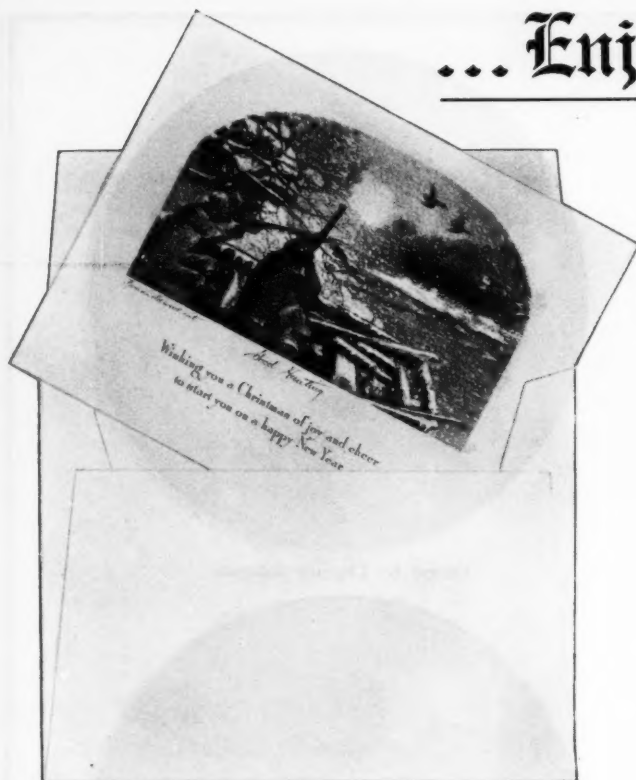
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Folder Type with Envelopes	3.75	7.00	12.00	

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100 3.00 Parcel Post Paid

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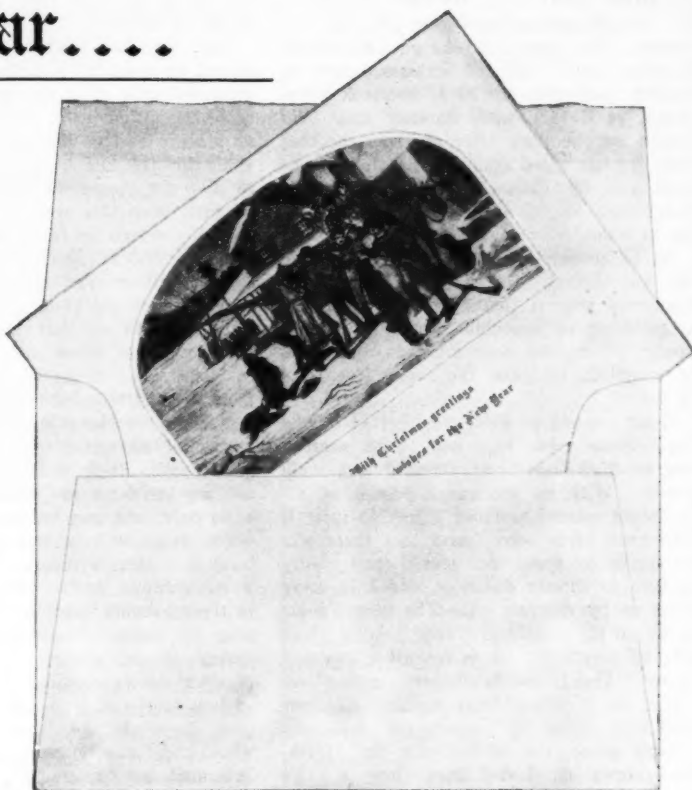
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HOW FAST CAN DUCKS FLY?

(Continued from page 15)

factory. Our plane could not go slow enough to keep behind mallards without danger of stalling; and even at 70 it overtook them almost as if they were standing still. We chased up one flock after another, checking their greatest speed against our dial. If mallards can fly themselves through the air faster than 55 miles an hour, my estimates are in error.

As to spoonbills—another slow duck—we did not directly test them. But in the frightened swarms that fled away there was a sprinkling of spoonbills, and they moved slowly. Compared with mallards, the speed of spoonbills is about the same, it seemed to me.

Great swarms of geese were rafted on the bay. Snow geese happened to be nearest, and we tried them first. Geese fly relatively slowly. With its windgauge pointer at 85, the plane seemed to move 2 feet to their 1. The great birds soon found that there was no escape by speed, but sensed their ability to turn in shorter distances, and kept away from us by sheering off. The plane, going at 85 on its outside arc, kept heading them off and pressing them in toward a common center. Finally we held them, herded like cattle, in a milling mass confined to short circles.

Gray geese—the white-fronts and Hutchins—proved no faster than their white cousins. Our evolutions about the bay had caused the several species to mingle in composite flocks. When we broke these up there was no difference in the time when the different breeds felt forced to dodge. I do not believe that any goose can move itself through the air at more than 50 miles an hour, or has a maximum flight speed equal to that of the slowest duck.

There were swans, too; and we tried them out. As air speed goes, they seem the slowest of waterfowl. At 72, our plane seemed moving twice as fast. Geese outpaced them; mallards passed them easily. Not over 45 miles an hour, I estimated, is the best that swans can do.

Our maneuvers kept the air full of frightened birds, and the end of one test usually left us in good position to begin another. It kept me busy watching the flocks break, checking their speed against the windgauge, and snapping the camera as opportunity offered. But the work was interesting, and I was sorry when the time came that our data seemed enough.

VII

In some respects our tests fell short of completeness in the results as planned. Our plane was one that could not hold the air at less than 60 miles an hour, and it was necessary for the pilot to keep its speed at a safe margin above this stalling point. The lowest figure that I noted on the anemometer was 70; and this was too fast to actually measure the speed of any but the swiftest ducks. To exactly determine the flight speed of the slower fowl a plane that would hold

the air at no more than 45 miles an hour would be essential.

The tests also failed, as might be expected, to show the minimum speed at which waterfowl must move through the air in order to be supported by it. This point, however, as already stated, has no practical ballistic value for the hunter. Our tests also failed to show the average or optimum travel speed of such birds, for when pursued they were naturally driven by terror to fly at the limit of their physical capacity. However, I could see no very marked difference between the rate at which the plane closed in before the birds fully realized that they were being pursued, and that when they had been forced to their speed limits by fear of the great monster that thundered after them. Possibly ducks may have an ability to develop a horizontal emergency speed perhaps a third greater than their ordinary rate of travel; but my estimates are based on my impressions only, and may be excessive.

On the other hand, our ability to overtake birds that were trying to outfly the plane on a straightaway course gave a good idea as to the maximum speed with which they were able to propel themselves, by their own energy, through the air. Further, the series of anemometer readings included those for various species of birds and definitely showed that the flight speed of waterfowl, as a whole and by individual species, is habitually overrated by hunters. It seems true that a large part of the high velocity shown in ducks passing over the earth's surface is, in fact, not their own speed but due to their being swept ahead by the blast of a following wind. Finally, birds swooping down from a height gain their excessive speed not so much by flying as by the use of gravity.

Many hunters honestly believe that they have seen ducks fly at the rate of 150 to 200 miles an hour. The tests here outlined, if they showed nothing else, at least prove such estimates to be gross exaggerations. We raced down and overtook scores of ducks with the plane, and found none that could move themselves through the air at 150 miles an hour, or even at half that velocity. It is possible for the ground speed of the fastest ducks to reach a rate of 100 miles or so an hour, but only if there is an assisting gale behind them to push them along. Conversely, if the same wind was blowing in opposition, it would slow down the ground speed of canvasbacks to even lower than the leisurely air speed of geese.

The tests also showed, as was to be expected, that when pushed to their limit there is a wide difference in respect to flight speed between species of waterfowl. This difference between a canvasback and a goose, according to my experience, amounts to about 40 per cent. As compared with a mallard, a canvasback is about one-fourth faster.

VIII

The first section of this article enumerates the twelve components that enter into the accuracy of long-range duck-shooting, and

(Continued on page 43)

"THE LONG TREK"

By DR. RICHARD L. SUTTON

6 x 9, 347 pages, more than 200 illustrations, the C. V. Mosby Co. \$5.

WE HAVE just finished reading, with pleasure and profit, the latest book from the pen of that noted naturalist, scholar, big-game hunter and explorer, Dr. Richard L. Sutton. This new book, which has been aptly titled "The Long Trek," should be of particular interest to readers of this magazine, not alone because of the very interesting story it tells, but also because Dr. Sutton is a member of the National Rifle Association, has from time to time written for THE AMERICAN RIFLEMAN, and is an unquestioned authority on the hunting of all sorts of game animals, including the biggest and most dangerous that are found in the world today; and on the rifles used for the purpose.

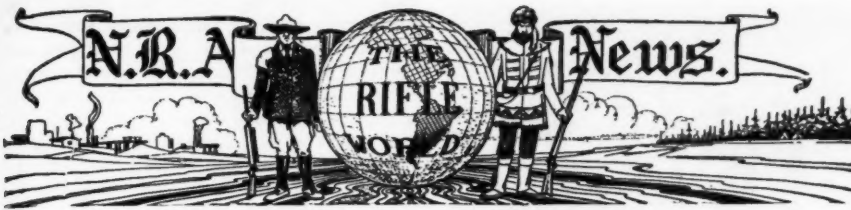
"The Long Trek" is an account of a trip taken by Dr. Sutton and his son, Dr. Richard L. Sutton, Jr., which took in East Africa, Sumatra, and Indo-China, and points intermediate and beyond. The book is not devoted exclusively to hunting, and carries a sub-title of "Around the World With Camera and Rifle," which well describes it. Of course there is considerable hunting, but there is much else besides. Dr. Sutton describes the countries visited, the history, habits and languages of the various native tribes. He tells of the difficulties that are inevitably encountered on a trip of this magnitude, and how they were overcome.

Toward the end of the book the author gives some very clear and pertinent information and advice to anyone who may be planning a trip to any of the countries visited, which alone should make the book worth its weight in gold. The notes on rifles and ammunition should interest every true rifleman, and particularly the man who may some day face dangerous game. Dr. Sutton is noted for the beautiful pictures that he takes; and these are not only fine technically, but this author has a gift for picking the subjects that will most interest his readers. And there are more than 200 of these.

And then, last but not least, is Dr. Sutton's rare literary style. As you get into the book you stretch out, sit back, and relax, while the author delights you with story and picture, and a delicious, dry, mellow humor that carries you on into the night without your knowing it.

Few—so very few of us, will ever be able to travel as Dr. Sutton has. Most of us will never set foot off our native land. A bitter thought at times. But after all, if we can have men like Dr. Sutton to entertain us and make us laugh; and, often without our realizing it, instruct us with their scholarly wisdom—perhaps our lot is not such a hard one after all.

LAURENCE J. HATHAWAY.



Conducted by L. Q. Bradley

Two Recent Rulings Affect Coming Gallery Matches

ADoption of the new five-bull 50-foot and 75-foot rifle targets, and amendment of the tyro definition in N. R. A. Postal competitions are two recent Executive Committee rulings of interest to postal-match shooters. Both changes will apply in the case of the forthcoming Gallery Rifle and Pistol Matches.

No change has been made in the sizes of the two standard indoor targets, the dimensions, sighting black, and stock of each remaining the same. The only difference is in the number of bull's-eyes on the target card, there being five now instead of six as formerly. With the elimination of the "sighting" or sixth bull, sighting shots on a record target in gallery rifle matches will likewise be eliminated. This places the indoor rifle matches on exactly the same basis as small-bore outdoor competitions. Before commencing a record score competitors may fire as many sighting shots as they wish, but all such sighters must be taken on practice targets. All shots fired on a record target will be considered in scoring the target.

The Executive Committee voted to amend the tyro rule because under the definition a tyro was "a shooter who had never previously won an N. R. A. competition medal." This definition permitted seasoned veterans to participate in tyro matches, even though such shooters had won numerous medals (not awarded by the Association). In several instances, for example, service or ex-service men who had engaged in match competition for years but who had never shot an N. R. A. event entered and fired the Association's tyro matches.

In doing away with the old tyro definition the Executive Committee did not lose sight of the importance of matches conducted solely for newcomers. The tyro matches, therefore, will continue to be conducted under the following conditions:

Open to.—Tyros only. "A tyro, in postal competitions (rifle or pistol as the case may be), is a shooter who has never won a trophy, medal or qualification, presented in competitions conducted or sanctioned by the National Rifle Association, any State rifle association, the Army, the Navy, Marine Corps or any National Guard organization."

For the sake of clarification, the Executive Committee authorized a few minor changes in the wording of certain rules, which changes,

together with those above referred to, appear in the latest reprint of the program, now ready for distribution. As formerly, due to the expense of printing, the N. R. A. Program of Postal Matches and Shooting Rules will be mailed only to those requesting a copy. The Association will gladly forward copies of the new program to anyone interested enough to ask for it, however.

Members of the N. R. A. who annually participate in the series of Gallery Rifle and Pistol Matches will be interested to know that the Postal Match Department at National Headquarters has been given additional facilities in the shape of both personnel and office space. This will enable us to give better service to the ever-increasing number of postal-match enthusiasts who get a real kick out of shooting the mail matches. We are in a position to promptly fill entries for all of the coming Gallery Rifle and Pistol events, the schedule of which follows:

N. R. A. GALLERY MATCHES

GALLERY RIFLE MATCHES

Name of match	Members' entry fee	Entries close	When fired
Prone Tyro	Dec. 1—December	
N.R.A. \$1—Club \$1			
Tyro Championship	Dec. 1—December	
N.R.A. \$1—Club \$1			
Individual Prone	Dec. 1—December	
N.R.A. \$1—Club \$1.50			
Individual Sitting	Dec. 1—December	
N.R.A. \$1—Club \$1.50			
Individual Kneeling	Jan. 1—January	
N.R.A. \$1—Club \$1.50			
Individual Standing	Jan. 1—January	
N.R.A. \$1—Club \$1.50			
Gallery Grand Aggregate	Dec. 1—December	
N.R.A. \$1—Club \$1.50			
Individual Free Rifle	Jan. 1—January	
N.R.A. \$1—Club \$1.50			
Gallery Champ. (any sights)	Jan. 1—January	
N.R.A. \$1—Club \$1.50			
Gallery Champ. (metallic sights)	Jan. 1—January	
N.R.A. \$1—Club \$1.50			
Two-Men Team	Jan. 1—January	
N.R.A. \$2—Club \$2			
Gallery Rifle Qualification	Never—Any Time	
N.R.A. \$1—Club \$1.50			
A. L. Individual Champ.	Jan. 1—January	
N.R.A. \$1—Club \$1			
American Legion Team	Feb. 1—February	
N.R.A. Club \$5			
Tyro Team	Feb. 1—February	
N.R.A. Club \$5			
Civilian Interclub (any sights)	Feb. 1—February	
N.R.A. Club \$5			
Civ. Interclub (metallic sights)	Feb. 1—February	
N.R.A. Club \$5			

COLLEGE AND SCHOOL MATCHES

Individual Scholastic Champ.	.....	Jan. 1—January
N.R.A. 25 cents—Club 25 cents		
Individual Collegiate Champ.	.....	Jan. 1—January
N.R.A. \$1—Club \$1.50		
Individual Military School	.....	Jan. 1—January
N.R.A. 25 cents—Club 25 cents		
Women's Indiv. Championship	.....	Jan. 1—January
N.R.A. \$1—Club \$1		
Women's Team	.....	Feb. 1—February
N.R.A. Club \$5		

(Continued on page 32)

HONOR ROLL—100 PER CENT N. R. A. CLUBS

(All club members are individual members of the N. R. A.)

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Mr. Jno. S. Michaelson, Secy.
227 E. Ohio Street
Indianapolis, Ind.

OILFIELD RIFLE CLUB
Mr. Earl Montgomery, Secy.
Ferdig, Mont.

SENECA RIFLE CLUB
Mr. Carl M. Snyder, Secy.
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Reading, Pa.

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Gary, Ind.

SAN FRANCISCO TRAFFIC RIFLE AND REVOLVER CLUBS
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Mr. Henry D. Block, Secy.
130 Monticello Avenue
Jersey City, N. J.

RIFLE CLUB OF SUPERIOR
Mr. M. J. Arbutuckle, Secy.
Superior, Wyo.

SWISS RIFLE CLUB
Mr. Isidor Ochsner, Secy.
General Delivery
Sumner, Wash.

WOODLAND RIFLE CLUB
Mr. J. S. Tallman, Secy.
Pleasantville, N. Y.

GREENVILLE RIFLE CLUB
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Greenville, Ohio.

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Wayne, Mich.

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Spearville, Kans.

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8427 Frontier Avenue
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Medical Arts Building
Houston, Tex.

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Cleveland, Ohio

GEO RIFLE CLUB
Mr. Harry V. Black, Secy.
Geba, Wyo.

TWO RECENT RULINGS AFFECT COMING GALLERY MATCHES

(Continued from page 31)

Freshman Team	Feb. 1—February
N.R.A. Club \$5	
Intercollegiate Tyro Team	Feb. 1—February
N.R.A. Club \$5	
Military School Team	March 1—March
N.R.A. Club \$5	
High School Team	March 1—March
N.R.A. Club \$5	
Girls' Intercollegiate Team	March 1—March
N.R.A. Club \$5	

MILITARY MATCHES

Individual Military Champ.	Jan. 1—January
N.R.A. Club \$1	
Individual .22-Pistol Mil. Champ.	Jan. 1—January
N.R.A. Club \$1	
Company Team Champ.	Feb. 1—February
N.R.A. Club \$5	
Regimental Championship	Feb. 1—February
N.R.A. Club \$5	
Company .22 Pistol Team	Feb. 1—February
N.R.A. Club \$5	

PISTOL AND REVOLVER MATCHES

Tyro Slow Fire	Dec. 1—December
N.R.A. Club \$1	
Tyro Rapid Fire	Dec. 1—December
N.R.A. Club \$1	
Individual Slow Fire	Dec. 1—December
N.R.A. Club \$1.50	
Individual Timed Fire	Dec. 1—December
N.R.A. Club \$1.50	
Individual Rapid Fire	Jan. 1—January
N.R.A. Club \$1.50	
.22 Slow Fire Pistol	Jan. 1—January
N.R.A. Club \$1.50	
Free Pistol	Jan. 1—January
N.R.A. Club \$1.50	
Individual Pistol Champ.	Jan. 1—January
N.R.A. Club \$1.50	
Police Individual Champ.	Jan. 1—January
N.R.A. Club \$1	
Pistol Qualification	Never—Any Time
N.R.A. Club \$1	
Police Team Champ.	Feb. 1—February
N.R.A. Club \$5	
Pistol Team Champ.	Feb. 1—February
N.R.A. Club \$5	

NAVY DEFEATS OLYMPIC CLUB TEAM IN THIRD ANNUAL SHOOT

THE Battleship Division Rifle Team, captained by Lieut. W. M. Hyman, U. S. N., and the civilian team representing the Olympic Club of San Francisco, held their third annual championship match at Fort Barry, Calif., August 24. The fleet team had previously defeated a selected California civilian outfit in a similar match fired over the same range.

Two handsome trophies were awarded the naval team for its twin victory. The Peter B. Kyne trophy was the "spoils" offered in the selected State team versus the Navy, while in the Olympic Club Fleet Team event the Olympic Club trophy was rewon by the sailor team.

James F. McCue, N. R. A. State Secretary for California, handled arrangements for the shoots and was present during firing of both matches.

These rifle matches with Navy were promoted by the Olympic Club at San Francisco three years ago and have already yielded contacts and marksmanship development beyond our greatest expectations. To stimulate such contests, Olympic Club conferred its perpetual trophy. With this promotion work under headway, our other N. R. A. outfits hereabout San Francisco Bay are now actively engaged to enlarge these entries for such rifle matches, and under the direction of George D. Difani, as secretary of Peninsula Rifle League, the program for next year will be made into a very attractive contest in small arms.

Scores of the final match follow:

Battleship Divisions Rifle Team

Vensel, F. E., Lt., Idaho	277
West, R. E., Cox., Idaho	278
Clarkson, A., GM 2c, New York	277



The winning Navy team and the two trophies they annexed

Gurgamus, A. A., S 2c, New York	282
Fairlamb, L. C., Ens., New York	283
Rutter, R. R., Corp., New York	274

Total 1,666

Olympic Club Rifle Team

Dolson, M. C.	272
McVey, M. C.	282
McCue, J. F.	246
Mingins, Roy W.	258
Randall, C. W.	260
Wayne, F. W.	276

Total 1,594

CIVILIAN TEAM AGAIN COPS INFANTRY MATCH

THE picture shows the victorious Nebraska Civilian Team in action. Right to left, they are: Front row, Wilbur T. Burgess; Charles J. Wertman, who won second place in the Chemical Warfare Match; Carl L. Fisher, team coach; Lester R. Lewellen; Elmer Oltmans; Arthur Lamml; Thomas F. Organ; and Richard H. Kassek; back row, Harold Meier; Homer Faubel; Capt. H. Lyon, referee; and Dr. Lincoln Riley, team captain. The majority of the members are young men between the ages of 19 and 22 years. Only three of the entire thirteen have had the benefit of military training.

The prized Infantry trophy is fought for under service combat conditions in the Evans Match. The course is a sort of skirmish run. Each member is given a number (worn on his

back) corresponding to that of a target in the series fired upon by the opposing team. As soon as the target is hit, it is withdrawn and the team referee withdraws the shooter wearing the corresponding number. All the targets are withdrawn at unknown intervals (controlled solely by the pit officers) and the opposing teams resume their march down the field until the targets again appear. As a target is hit in the black, it is immediately pulled and remains down. Sight adjustments must be made for the new elevation and wind allowance required by each change in range, under fire, hurriedly, but accurately. The line continues to advance and shoot until every target of the opposing team is "pulled." That team is then eliminated.

Because of the training they receive in skirmish practice, enlisted men are naturally at an advantage in this match. However, it was won last year by a group of eastern civilians from Massachusetts. The fact that it was won again by a civilian team, this year from the West, augurs ill for any would-be invader. It indicates the potential defensive power possessed by a nation of riflemen. It likewise exemplifies the primary purpose of the annual National Matches.

Nebraska mixed strategy with fine shooting to outclass all opponents in the Infantry Match. They watched their prospective opponents carefully and marked the key men. When they had picked the wind and range dopers on one team, they immediately singled out the most dangerous opponents on another.

The Nebraska team, for instance, had noticed that a certain R. O. T. C. outfit had been reduced to one man against five; but that this lone member had saved his team by downing all five of his opposition targets. When Nebraska drew this R. O. T. C. team in the next elimination run, its members directed all their fire upon the target of this particular foe and eliminated him at the outset. In another elimination, they "killed" three key men at 1,000 yards to begin the march. The Nebraska team by co-ordinated effort eliminated, in turn, the following teams: Arizona, Kansas, Pennsylvania, and Oregon National Guard.



Victorious Nebraska civilians in action (posed)

FOURTH ANNUAL NORTHWEST PISTOL AND REVOLVER MATCH

THE Fourth Annual Northwest International Pistol and Revolver Association Match, held at Fort Lawton, Wash., August 10, was the most successful match ever held in the history of the Association. Over 200 people attended from all parts of the Northwest, the U. S. Navy, celebrating Fleet Week in Seattle, being well represented.

Capt. Albert H. Swift as range officer handled the match in excellent manner and kept things moving all the time, while Lieut. Waldo E. McKinney, statistical officer, kept the match score cards and lists in very good shape.

At the election of officers which took place during the noon recess, the following were chosen: Capt. Ralph Wiltamuth, U. S. A., now at the University of Washington, president; Capt. J. J. Haag, Seattle Police Department, vice president; Lieut. Roy E. Meister, Washington National Guard, secretary.

It was also announced that the matches would be held during Fleet Week in Seattle in 1931. There will be medals as well as trophies at the match next year. There will be a trophy provided for the high .45-caliber team.

YAKIMA LONG-RANGE CLASSIC

THE Grand Aggregate Match (to the winner the grand prize, the Veterans of Foreign Wars trophy, presented by William Wharton Post 379, V. F. W., with medals to first three) resulted as follows:

	Score
Norman L. Glossbrenner, Yakima	352
George B. Bentler, Yakima	352
Fred Wate, Yakima	349
E. H. Bucknell, Seattle	345
Roy W. Jellison, Monroe	330
Frank Abhold, Yakima	329
R. E. Ervin, Tacoma	324
Joe L. Aprill, Snohomish	323
John M. Curry, Yakima	318
Joseph E. Frisque, Yakima	311
W. S. Ford, Wenatchee	308
Le Roy Schreiner, Yakima	292
G. R. Clark, Seattle	288
Jesse Kiser, Wenatchee	287
Clint Cordell, Wenatchee	282
Eli F. Davis, Yakima	244
H. A. Kenyon, Yakima	244
Rufus Kiser, Wenatchee	129

* Did not fire all stages.

Glossbrenner, in Yakima match, had 14 bulls with 9 V's.

Special prizes: In each C target was pasted a lithograph of Yakima's famous "delicious" apple. Competitors puncturing the center of the target and the apple had their choice of all the apples or cantaloupes they could eat. Those getting apples were: Ervin, 3; Jellison, 2; Glossbrenner, Wate, Kenyon, Aprill, Bucknell, Curry and Bentler 1 each.

Correction: The program of this match stated that the highest score ever made in the Moxee Match, 1,200 yards, was a 94 made by Mr. Jellison in 1926. This should have read "96," metallic sights. The fine, specially engraved medal for a possible score in this match is still being held. Who will win it? Yakima and Sea Girt are the only places that regularly stage rifle contests at 1,200 yards. Sea Girt may have her ocean gales, changing light, and fishtails, but the crescent-shaped basin, cut midway with a deep coulee, wherein the

Yakima companies of the W. N. G. and the Yakima Rifle Club have their respective rifle ranges, has things in it no other range can boast of.

Air pockets of all shapes and sizes, cross currents of many velocities and angles, moving in every plane from the horizontal to the vertical, playing hide-and-seek with the horned toads, the sand lizards, the long-eared jack rabbits and themselves—(?) and venture-some riflemen, shimmering, shifting mirage, "boils" and "fishtails," are something to study all right enough, for they prevail on nearly all ranges; but to meet conditions as they exist here and in many places where future battles are quite likely to be fought, the sniper rifleman must have very much finer equipment.

YOUNG OKLAHOMA CLUB FAST DEVELOPING

THE Blackwell Rifle Club, of Blackwell, Okla., is a young club. However, 1929-30 was a successful year on the gallery range with them.

Prior to 1930 none of the club members had seriously practiced in all of the four positions, doing most of their firing in the prone position. The officers, seeing that this sort of practice was developing a bunch of one-sided marksmen, decided to try to remedy the ill by scheduling a number of four-position events. No sooner had the first match been announced than four-position firing became the only thing, with various weaknesses appearing and immediate steps taken to correct them.

Since the first of November, 1929, the club has fired a total of nine matches, winning four and losing five. They won from Canon City, Colo., Enid, Okla., twice; and Coffeyville Kans. They lost to Canon City, Colo.; Stuyvesant, N. Y.; Toledo, Ohio; Drumright, Okla.; and Whitefish, Mont. The club considers that to be a very fair record, since they did not confine themselves to the tyro class, in which they rightfully belong.

To date only two men have won medals in the N. R. A. gallery qualification course. They are the president, Charles Stants, and the secretary, P. L. Wilbur. Members are urged, however, to fire this course, and several of the men have their targets, waiting for the time when they feel right.

The Blackwell club is looking forward to a bigger and better season for 1930-31 and are on the lookout for indoor postal matches with anyone who is interested.

WORLD-WIDE INTEREST IN FORTH-COMING OLYMPIC GAMES

THIRTY-FIVE nations already have signified their intention to participate in the games of the Tenth Olympiad to be celebrated July 30 to August 14, 1932, according to an announcement by the Organizing Committee.

These assurances have come in response to the committee's invitations sent out last February, to National Olympic committees, inviting their nations to participate in the coming

world event. At the same time the United States Government sent from Washington, D. C., communications to the governments of all Olympic countries, calling attention to the official invitations.

World-wide interest in the Tenth Olympic Games was greatly stimulated by the report of the Organizing Committee, given at the recent Olympic Congress in Berlin. This report showed that nearly all facilities are already available for the celebration of the games, consisting of 135 distinct events, taking place during sixteen days and nights.

The Organizing Committee wishes to make known to the public its great appreciation of the early and enthusiastic acceptance of its invitations by so many nations. This early response, almost two years in advance of the games, clearly indicates the international interest in the Olympic movement, and the committee is sending a special communique of appreciation to each national Olympic committee.

RIFLEMAN TROPHY MATCH IN FINAL SWING

MARE ISLAND RIFLE CLUB, of California, still in its infancy (being only seven months old), continues to lead all contestants in the 1930 American Rifleman Trophy Match. In an effort to make California the banner State in the competition, Mare Island is strongly encouraged by the presence of two other clubs from the Golden Land among the leaders' group, namely, Palo Alto Rod and Gun Club and the Burbank Rifle and Revolver Club. Indiana is also in the race for State honors, being well represented by three clubs numbered among the leaders.

Much enthusiasm and interest is being displayed in the competition this year as evidenced by the splendid scores already turned in. The present leader's score is far in excess of that of the leader in November, 1929. The 1930 runner-up clubs have likewise piled up big scores. Very little contrast is noticeable between the scores of five of the six high contenders, and particularly keen competition is the result. An interesting high light at this stage of the match is the increase of seven clubs which have passed the 100-point mark. In the match last year only four clubs had crossed the coveted 100-point mark prior to November 1.

Centennial Junior Rifle Club, of Chicago, continues to hold its place among the high Senior clubs, and although slipping out of second place the youngsters are still in the fight. They have a good chance to win one of the very attractive trophies and prizes to be awarded the high competitors at the finish of the match.

With just two more months to go all clubs having run up substantial scores are urged to make special effort to pass the 100-point mark in order to be in line for consolation prizes.

Standing of the leading clubs follows:

1. Mare Island Rifle Club, Mare Island, Calif.	407
2. Shawano Rifle Club, Shawano, Wis.	210
3. Centennial Junior Rifle Club, Chicago, Ill.	206
4. Dayton Power & Light Co. Rifle Club, Dayton, Ohio	194

Team match scores follow:

	Score
1. Quinnipiac Rifle and Revolver Club, New Haven	1,969
2. Remington Arms Club, Bridgeport	1,940
3. Lufbery Rifle Club, Wallingford	1,928
4. Hartford Rifle and Revolver Club, Hartford	1,913
5. General Electric Rifle Club, Pittsfield	1,898
6. Foresters Rifle and Pistol Club, Shelton	1,889
7. Rippowam Rifle and Gun Club, Stamford	1,883
8. Middlefield Rifle Club, Middlefield	1,875
9. Pioneer Hose Rifle Club, Groton	1,858

STRONG NEW YORK CLUBS "TIE UP"

THE Columbia Rifle Club, of Hudson, N. Y., fired a tie match with the Forbes Rifle and Pistol Club, of Rensselaer, on the range of the Forbes Club, Sunday, September 14. Each team scored 1,146 x 1,250, the course being the Army D course at 200 yards.

C. Jordan, of the Forbes Club, was the last scoring man to shoot, and at the time he went on the line Columbia was 14 points in the lead. By his wonderful score of 141 x 150, slow fire, including a string of 17 consecutive bull's-eyes and 23 out of the 30 shots fired in slow fire being bull's-eyes, topped off with a good rapid-fire string, he managed to tie the score.

Wight, of Columbia, had a tough break in losing his Expert Qualification by 1 point, scoring 223 when 224 is necessary for Expert. He was the only one of the ten men scoring for both teams who shot below Expert.

This is the second tie match between these two clubs. The other tie match was fired on the Bay Creek range at Hudson on July 13. Forbes won the shoot-off on the same range on August 24. The tie scores for the previous matches were 1,118 for each team, and Forbes won with a score of 1,107 against 1,069 for Columbia.

INTERNATIONAL TEAM CONTRIBUTIONS

Amount of contributions previously received.	\$297.60
Madison Rifle and Pistol Club, Madison, Wis.	10.00
T. H. Willard, Fort Lewis, Wash.	5.00
Maj. N. C. Nash, Jr., Boston, Mass.	4.00
G. W. Wulff, Cleveland, Ohio	4.00
A. L. Eubank, Telluride, Colo.	2.10
H. D. Powell, Pullman, Wash.	2.00
William L. Gage, Parnassus, Pa.	2.00
George H. Carrington, Cristobal, C. Z.	2.00
Ensign H. E. Sears, Pensacola, Fla.	2.00
Harry Wermeyer, Pittsburgh, Pa.	2.00
J. T. Spofford, Boston, Mass.	2.00
Edwin D. Taylor, Pearl River, N. Y.	2.00
Charles Dempsey, Solvay, N. Y.	2.00
Burt Freeman, Los Angeles, Calif.	2.00
T. R. Coose, Lewiston, Me.	1.00
John Strock, Rock Springs, Wyo.	1.00
Anonymous	1.00
E. J. McAndrew, Troy, Mont.	1.00
E. H. Gruver, Allentown, Pa.	1.00
Cleo A. Fritz, Detroit, Mich.	1.00
J. W. Harding, Pittston, Pa.	1.00
Total.	\$347.70

OFFICIAL BULLETINS—N. R. A. MATCHES

TYRO SMALL-BORE-TEAM MATCH

(9 Entries)

When fired.—July 26.

Conditions.—Teams of 10, 5 high total scores to count, 20 shots per man at 50 yards and at 100 yards; any 22 rifle, metallic sights. To the winners, 5 silver medals; bronze medals to the second and third teams; percentage medals to all shooting members scoring 360 or better.

No.	Club and address	Score
1.	Turlock Civilian Rifle Club, Turlock, Calif.	396
	W. F. Turner	396
	D. A. Cook	395
	L. L. Miller	394
	D. R. Edlund	384
	W. Doerksen	383
	Total score	1,952

2.	Maioning Rifle Club, Youngstown, Ohio	1,907
3.	South Bend Rifle Club, South Bend, Ind.	1,898
4.	Rippowam Rifle and Gun Club, Stamford, Conn.	1,880
5.	Snoqualmie Valley Rifle Club, Cedar Falls, Wash.	1,872
6.	Hawthorne Gun Club (Women's), Chicago, Ill.	1,869
7.	Waynesboro Rifle Club, Mount Alto, Pa.	1,847
8.	Stanton Pistol and Rifle Club, Pittston, Pa.	1,839
9.	Union City Rifle Club, Jersey City, N. J.	1,829

SPRING DEWAR COURSE TEAM CHAMPIONSHIP

(9 Entries)

When fired.—July 26.

Conditions.—Dewar International Team Match course and conditions. To the winning team, 5 silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Quinnipiac Rifle and Revolver Club, New Haven, Conn.	398
	Eric Johnson	398
	H. J. Gussman	398
	W. O. Breuler	396
	E. S. Doyle	396
	J. S. Stewart	393
	Total score	1,979
2.	Westric Rifle Club, Chicago, Ill.	1,971
3.	Tulsa Rifle Club, Tulsa, Okla.	1,968
4.	Turlock Civilian Rifle Club, Turlock, Calif.	1,958
5.	Toledo Rifle and Pistol Club, Toledo, Ohio	1,953
6.	National Cash Register Rifle Club, Dayton, Ohio	1,939
7.	Rippowam Rod and Gun Club, Stamford, Conn.	1,881
2	not reported.	

SMALL-BORE-TEAM SPRING CHAMPIONSHIP

(10 Entries)

When fired.—July 26.

Conditions.—Teams of 10, 5 high total scores to count, 20 shots per man at 50 and at 100 yards; any 22 rifle, any sights. To the winner, the Pennsylvania Rifle Association trophy and 5 silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Quinnipiac Rifle and Revolver Club, New Haven, Conn.	397
	F. W. Rogers	395
	A. J. Stevens	395
	W. O. Breuler	395
	Eric Johnson	395
	E. S. Doyle	394
	Total score	1,976
2.	Ontario Rifle Club, Ontario, Calif.	1,976
3.	Westric Rifle Club, Chicago, Ill.	1,973
4.	Perth Amboy Rifle Club, Perth Amboy, N. J.	1,970
5.	Portland Rifle Club, Portland, Oreg.	1,966
6.	Toledo Rifle Club, Toledo, Ohio	1,962
7.	Deerfield Gun Club, Kings Mills, Ohio	1,959
8.	National Cash Register Rifle Club, Dayton, Ohio	1,946
9.	Massachusetts Rifle Association, Melrose, Mass.	1,940
10.	Jamestown Rifle Club, Jamestown, N. Y.	1,920

AMERICAN LEGION SMALL-BORE-TEAM CHAMPIONSHIP

(2 Entries)

When fired.—July 26.

Conditions.—Open to Legionnaires only. Teams of 10, 5 high total scores to count, 20 shots per man at 50 and 100 yards; metallic sights. To the winning team, 5 silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Frankford Post No. 211 Rifle Club, Philadelphia, Pa.	389
	Competitor No. 3	387
	Competitor No. 4	386
	Competitor No. 1	386
	Competitor No. 5	382
	Competitor No. 2	382
	Total score	1,926
2.	Baldwin-Patterson Post Rifle Club, Des Moines, Iowa	1,878

30-06 RIFLE INTERCLUB SPRING CHAMPIONSHIP

(6 Entries)

When fired.—July 26.

Conditions.—Teams of 5, 20 shots per man, 200 yards, slow fire; 20 shots, 200 yards, rapid fire; and 20 shots, 600 yards; any 30-06 rifle except heavy barrels; metallic sights. To the winners, 5 silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Mountain View Rifle Club, Los Gatos, Calif.	191
	Frank Lain	191
	A. R. Bodenschatz	191
	J. B. Lindeman	190
	J. W. Cox	187
	H. W. Hendrix	188
	Total score	947
2.	Massachusetts Rifle Association, Melrose, Mass.	933
3.	Jamestown Rifle Club, Jamestown, N. Y.	912
4.	Worcester Pistol and Rifle Club, Worcester, Mass.	897
5.	San Luis Obispo Rifle Club, San Luis Obispo, Calif.	897
6.	Topeka Isak Walton League, Topeka, Kans.	665

OBSOLETE RIFLE INTERCLUB SPRING CHAMPIONSHIP

(4 Entries)

When fired.—July 26.

Conditions.—Teams of 5, 10 shots per man standing, 10 shots sitting or kneeling, and 10 prone, all at 200 yards, target A, any center-fire except 30-06, and match rifles. To the winners, 5 silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Toledo Rifle and Pistol Club, Toledo, Ohio:	
	A. J. Burtcher	144
	A. B. Miller	142
	C. A. Dority	140
	A. R. Smith	140
	Edson Kinkel	140
	Total score	707
2.	Golden Gate Rifle and Pistol Club, San Francisco, Calif.	706
3.	Des Moines Rifle and Revolver Club, Des Moines, Iowa	700
4.	San Luis Obispo Rifle Club, San Luis Obispo, Calif.	690

N. R. A. INTERCLUB PISTOL TEAM MATCH

(2 Entries)

When fired.—July 26.

Conditions.—Teams of 5, National Pistol Team Match course and conditions. To the winners, 5 silver medals.

No.	Club and address	Score
1.	Los Angeles Police Rifle and Revolver Club, Los Angeles, Calif.	
	J. A. Bartley	276
	C. E. Ward	274
	R. J. Nowka	273
	J. E. Davis	268
	F. G. Haley	262
	Total score	1,352
2.	Toledo Rifle and Pistol Club, Toledo, Ohio	1,312

RAILWAYMEN'S INDIVIDUAL SMALL-BORE MATCH

(27 Entries)

When fired.—August 12.

Conditions.—International Railwaymen's Team Match course and conditions. To the winner, a gold medal; second, a silver medal; third to tenth, bronze medals.

No.	Name and address	Score
1.	J. P. Cline, 213 N. F. Street, Madera, Calif.	397
2.	O. E. Crockett, R. F. D. No. 3, Logansport, Ind.	397
3.	L. C. Turner, 713 E. Powell Ave., Fort Worth, Tex.	397
4.	Z. E. Fraley, Portsmouth, Ohio	397
5.	Michael J. Reilly, 620 Vernon Blvd., Long Island City, N. Y.	392
6.	E. M. Faris, c/o N. & W. Ry. Y. M. C. A., Portsmouth, Ohio	392
7.	F. J. Paffe, 14 Ribera Street, St. Augustine, Fla.	392
8.	J. W. Ahlken, Overly, N. Dak.	392
9.	F. B. Nail, 522 Pennsylvania Ave., Fort Worth, Tex.	388
10.	John Henry, 1680 Northwest Drive, Des Moines, Iowa	378
11.	O. L. Seth, c/o N. & W. Ry. Y. M. C. A., Portsmouth, Ohio	387
12.	E. M. Kidder, 8 Page St., Ayer, Mass.	386
13.	W. E. Frasch, 2770 Indianola Ave., Columbus, Ohio	385
14.	G. C. Hatfield, 777 E. Main St., Chillicothe, Ohio	384
15.	J. C. Drake, c/o N. & W. Ry. Y. M. C. A., Portsmouth, Ohio	381
16.	W. L. Montgomery, Avinger, Tex.	380
17.	C. L. Pfieger, 231 Woodlawn Terrace, Collingswood, N. J.	378
18.	Charles R. Kent, No. 1 Park Drive, Charleston, W. Va.	375
19.	J. R. Wolcagle, Larimer, Pa.	375
20.	R. L. Ericson, 617 Atlantic Ave., Thief River Falls, Minn.	375
21.	Thayer Mayes, South Charleston, W. Va.	370
6	not reported. All ties broken in accordance with N. R. A. rules.	

AMERICAN LEGION INDIVIDUAL CHAMPIONSHIP

(34 Entries)

When fired.—August 15.

Conditions.—Ten shots standing, 10 shots sitting, and 10 shots prone at 200 yards, any center-fire rifle, A target; metallic sights. To the winner, a gold medal; a sterling-silver medal to the runner-up; third to tenth, bronze medals.

No.	Name and address	Score
1.	C. R. Ripley, Dennison, Ohio	148
2.	Dr. R. E. Rainsberger, Uhrichsville, Ohio	148
3.	A. Q. Johnson, Long Beach, Calif.	147
4.	Lt. J. F. Woolshlager, Caatorland, N. Y.	146
5.	C. C. Hullinger, Devils Lake, N. Dak.	146
6.	John Henry, Des Moines, Iowa	145
7.	Edwin Anderson, Des Moines, Iowa	144
8.	Fred Buffolo, Kenosha, Wis.	144
9.	W. H. Delbruegge, Bend, Oreg.	144
10.	A. C. Berg, Vallejo, Calif.	143
11.	Pearl T. Clapp, Brattleboro, Vt.	143
12.	G. G. Cooper, Des Moines, Iowa	143
13.	Thomas D. Wilson, Des Moines, Iowa	143
14.	E. G. Trompeter, International Falls, Minn.	142
15.	Fred Ostlund, Kenosha, Wis.	141
16.	John J. Kipkey, Ames, Iowa	141
17.	L. L. McGee, Turlock, Calif.	141
18.	R. O. Flanders, Liberal, Kans.	140
19.	John W. Farris, Des Moines, Iowa	140
20.	E. J. Effinger, Thief River Falls, Minn.	139
21.	Kenneth W. Wright, Chanute, Kans.	139
22.	J. H. Fresno, Des Moines, Iowa	139
23.	R. O. Evans, International Falls, Minn.	138
24.	M. A. Robedeau, Kenosha, Wis.	137
25.	James Kershek, Kenosha, Wis.	136
26.	Fred Mielke, Kenosha, Wis.	136
27.	Carl H. Hanrikson, Kenosha, Wis.	133
28.	Jess Danielson, Des Moines, Iowa	134
29.	John J. Dieu, Kenosha, Wis.	130
30.	Raymond E. Stacy, Kenosha, Wis.	129
31.	Bert M. Vander Steen, Kohler, Wis.	124
2 did not shoot—scoresheet returned; 1 not reported.		

AMERICAN LEGION HIGH-POWER-TEAM CHAMPIONSHIP

(5 Entries)

When fired.—August 15.

Conditions.—Three stages fired in following order: First stage, 10 shots sitting, slow fire; second stage, 10 shots standing, slow fire; third stage, 2 strings of 5 shots each rapid fire, prone from standing, at 200 yards; target A; any center-fire rifle; metallic sights. To the winning team, silver medals; bronze medals to the second and third teams.

No.	Club and address	Score
1.	Smith-Reynolds Post No. 14, A. L. Rifle Club, Vancouver, Wash.	146
	R. C. Brechtbill	144
	J. M. Eakin	144
	C. Behrens	144
	H. T. Gage	144
	Glen Stotts	144
Total score		722
2.	Vallejo Post No. 104, A. L. Rifle Club, Vallejo, Calif.	693
3.	Baldwin-Patterson Post, A. L. Rifle Club, Des Moines, Iowa	691
4.	Kenosha Legion Post No. 21 Rifle Club, Kenosha, Wis.	686
5.	Brattleboro Post No. 5, A. L. Rifle Club, Brattleboro, Vt.	675

INDIVIDUAL SCHUETZEN MATCH

(17 Entries)

When fired.—August 27.

Conditions.—Forty shots standing (free-rifle position) at 200 yards, 200-yard Standard American target (same as 50-yard Standard American pistol); any rifle not exceeding 1,500 f. s. in velocity; any sights. To the winner, a gold medal; second, a silver medal; third to ninth, bronze medals.

No.	Name and address	Score
1.	E. J. Muhl, Lost Nation, Iowa	335
2.	A. K. Friedrich, Ames, Iowa	327
3.	Mike Altman, La Verne, Iowa	322
4.	Nick Altman, La Verne, Iowa	315
5.	E. R. Franklin, International Falls, Minn.	301
6.	E. H. Dehnert, La Verne, Iowa	299
7.	George Stoltenberg, Omaha, Nebr.	281
8.	George A. Meier, Omaha, Nebr.	278
9.	Edson Kliffel, Toledo, Ohio	275
10.	A. N. Winther, Omaha, Nebr.	274
11.	J. A. Sweton, Omaha, Nebr.	215
12.	Arthur O. Hagen, Northwood, N. Dak.	173
5 not reported.		

FREE-RIFLE SPRING CHAMPIONSHIP MATCH

(14 Entries)

When fired.—August 27.

Conditions.—Twenty shots in each position—standing, kneeling, and prone—at 300 meters. International 300-meter target, any rifle, metallic sights. To the winner, a gold medal; second to ninth, bronze medals; percentage medals to all making 80 per cent or better.

No.	Name and address	Score
1.	Dr. B. J. Ochsner, Durango, Colo.	537
2.	Edwin Anderson, Des Moines, Iowa	516
3.	A. K. Friedrich, Ames, Iowa	489
4.	H. J. Lockwood, Glendale, Calif.	468
5.	R. O. Evans, International Falls, Minn.	468
6.	C. C. Harmer, Butler, Pa.	457
7.	E. R. Franklin, International Falls, Minn.	446
8.	Robert A. Wright, Butler, Pa.	386
6 not reported.		

AMERICAN LEGION JUNIOR RIFLE TEAM MATCH

CORRECTED BULLETIN NO. 43, SEPTEMBER 1

Conditions.—Open to Junior Rifle Clubs sponsored by the American Legion; teams composed of 5 members; 20 shots prone, per man, 50 feet, indoors or outdoors; metallic sights. To the winning team, the Arthur A. Mitten American Legion Junior Rifle Team trophy and 5 bronze medals; bronze medals to the second and third teams.

1.	Mahoning Post A. L. Rifle Club, Youngstown, Ohio:	Score
	1. T. Van Cise	196
	2. N. Dickason	195
	3. M. Garwood	200
	4. C. Andrews	197
	5. R. Hughes	200
Total score		988

2.	Harry W. Congdon Post No. 11, A. L. Rifle Club, Bridgeport, Conn.	979
3.	Harry W. Congdon Post No. 11, A. L. Rifle Club, Bridgeport, Conn.	918
4.	W. P. Gallagher Post No. 96, A. L. Rifle Club, Lima, Ohio	901

DISQUALIFIED—CERTIFICATES NOT RETURNED		
5.	Whittier Legion Rifle Club Team No. 2, Whittier, Calif.	907
6.	Whittier Legion Rifle Club Team No. 1, Whittier, Calif.	800
7.	Whittier Legion Rifle Club Team No. 3, Whittier, Calif.	649

The following teams reported, but as conditions of the match were not fully complied with, the scores can not be counted:

8.	University of Hawaii Girls Rifle Team, Honolulu, Hawaii (Honolulu Post)	949
9.	Kau Tom Post A. L. Rifle Club (Boys), Honolulu, Hawaii	934
10.	Kau Tom Post A. L. Rifle Club (Girls), Honolulu, Hawaii	845

SMALL-BORE LONG-RANGE TEAM MATCH

BULLETIN NO. 44, AUGUST 27

(5 Entries)

Conditions.—Teams of ten, 5 high scores to count. 20 shots for record per man at 200 yards, decimal target, any .22 rifle, any sights. To the winners, silver medals; bronze medals to the second and third teams.

1.	Long Beach Rifle and Revolver Club, Long Beach, Calif.	Score
	1. F. Von Derschere	197
	2. A. Q. Johnson	197
	3. C. Moore	194
	4. Mrs. Anne Moore	194
	5. W. K. Bowman	194
Total score		976
2.	Toledo Rifle and Pistol Club, Toledo, Ohio	961
3.	Tulsa Rifle Club, Tulsa, Okla.	953
4.	Deerfield Gun Club, Kings Mills, Ohio	946
5.	Mistletoe Rifle Club, Okmulgee, Okla.	887

INTERESTING HIGH LIGHT OF INDIANA ASSOCIATION ANNUAL MEETING

AT THE request of the secretary, 1st Lieut. Willard P. Dunbar, who has been assisting him with the membership and correspondence work of the Association for the past two years, gave an oral statement of the present status of affairs of the Association. Through an active plan of co-operation with the Secretary of the National Rifle Association of America, and a State-wide publicity campaign, the two Associations have organized some fifty Senior Rifle Clubs in the State of Indiana this year. Thirteen Junior Rifle Club charters have been granted. The State Association has raised its membership from an average of less than 80 members a year for the past five years to over 160 members, to date, for 1930. If this co-ordination of the membership

efforts of the State and National Associations continues to improve the interest in shooting throughout the State of Indiana a definite proposal will be submitted to make constitutional provision for its adoption.

STOLEN—A SPRINGFIELD

MR. W. F. CHRISTOPHERSON, Secretary Milwaukee Rifle Club, Milwaukee, Wis., advises that a Springfield U. S. Army rifle, Model 1903, No. 279102, the property of the above-mentioned club, was stolen at the Milwaukee-Racine County-Line National Guard range on August 24.

Members purchasing Springfields are requested to be on the lookout for this stolen rifle.

THE INTERNATIONAL MATCHES, 1930

(Continued from page 10)

The final result of the .22 Championship of the World for the standing position was:

First place and Championship, America, 1,804 points. Renshaw, 368; Sharp, 365; Parsons, 363; Seitzinger, 357; Bruce, 351.

Second place, Belgium, 1,794 points.

Third place, Denmark, 1,770 points.

Fourth place, France, 1,769 points.

Fifth place, Italy, 1,745 points.

Sixth place, Finland, 1,734 points.

Seventh place, Holland, 1,592 points.

Renshaw, Petersen, and Kulstrup, of Denmark, tied for individual championship, with 368. Petersen had 19 10's, Kulstrup had 18, and Renshaw had 17; so Petersen won the tie, becoming Individual Standing Champion of the World with the .22.

The next day, Sunday, August 3, found us very much encouraged, and ready for the kneeling match. The team was changed by the substitution of Swanson for Sharp. The day's shooting was a repetition of the day before as far as our success was concerned, though when I first went in the stand after the meeting of the control committee I was greeted by the information that Swanson, who was shooting, "was not doing very well." This amused me when Swanson ended the day as Champion of the World for the kneeling position.

First place and World Championship kneeling, America, 1,877 points. Swanson, 382; Bruce, 376; Renshaw, 374; Parsons, 373; Seitzinger, 372.

Second place, Finland, 1,863.

Third place, Denmark, 1,843.

Fourth place, France, 1,824.

Fifth place, Belgium, 1,791.

Sixth place, Holland, 1,723.

Individual Champion of the World, Swanson, America.

Monday, the 4th, the day of the Prone Championship, dawned with a young hurricane under way. The rain was coming down in torrents, and the wind attained such high velocity

(Continued on page 42)



(A Unit of the National Rifle Association devoted to teaching every boy and girl in America the safe and accurate handling of the rifle.)

Conducted by H. H. Goebel

Biweekly Team Matches

HAVING successfully conducted the biweekly plan of team matches over the past three years, the plan with but few changes and additions is again under way. In order to keep the schedule of matches more uniform they now require eight months of shooting in three series of five matches each. Starting the first series in the early fall, we learned that in several instances teams were unprepared to fire the complete schedule, and consequently the first match was advanced to the week ending October 11.

Conducting the plan, one section of prone shooting and one of prone and standing, 47 teams are at the present entered for the prone matches and 18 for the position matches. Malden High School, of Malden, Mass., is leading with the number of entrants, having registered three teams in the prone and one team in the position matches. Any Junior Rifle Club in good standing with the National Rifle Association Junior Rifle Corps, regardless of its local affiliation, is eligible to compete in these matches.

The necessary incentives, including short series of matches, divisions or leagues in each series, and special awards for the three high teams in each division, hold the plan attractive through the encouragement for better individual and team scores. Rather than place all entrants in one large national event, they are classified by scores in three divisions, so that throughout the course of a series teams are always competing along with clubs of their own approximate shooting strength. They are privileged to advance to higher divisions of rating when their scores warrant the advancement.

Points are allotted according to standing in each event in each match. In the A division, consisting of the more experienced teams, points are given in multiples of 30 up to 300 for standing. The B group, consisting of the less experienced teams, receive points in standing in each match in multiples of 20 up to 200. The C group, consisting of newly organized or inexperienced shooting groups, also receive points in multiples of 10 up to 100. In the Expert Division, fired in two positions, there is no breakdown by groups and teams receive points with respect to their standing in multiples of 10 to 100.

The complete plan and conditions of fire have been published in previous issues of the *News*. We suggest that all team leaders become familiar with the plan and conditions and also enter their clubs, thereby creating local interest, competitive spirit, and national recognition.

EXPERTS AND DISTINGUISHED RIFLEMEN

IN QUALIFYING through the many intermediate stages of marksmanship through Expert Rifleman, the following have demonstrated that they can consistently "hit where they aim." Not only have they excelled in one position, but in all four—prone, sitting, kneeling, and standing. Three members have qualified for the final stage and are now listed on the select roll of Distinguished Riflemen. As a reward these members are now displaying their gold medals and bars:

Florine Hayes, Canon City, Colo.
Stella Woodring, Canon City, Colo.
Ladislav Hasek, Hilton, Calif.
Dorothy Chapman, Ridgewood, N. J.
John Castle, Elgin, Ill.
Toby Weinschenker, Chicago, Ill.
Mildred C. Harker, Baltimore, Md.
Harry Foster, Reading, Mass.
Joe Frady, Tulsa, Okla.
Paul Poffenbarger, Tulsa, Okla.
Gilman Ellis, South Portland, Me.
Jack Boyd, West Hartford, Conn.
Robert Cissell, Indianapolis, Ind.
Billy Kitch, Rice, Ariz.
Melcher Fober, Portland, Me.
Bill Masters, Kansas City, Mo.
Horace Smallridge, Charleston, W. Va.
Roy J. Peabody, Louisville, Ky.
George Grisinger, Beckley, W. Va.
L. Funkhouser, Hagerstown, Md.
Thomas Cunningham, Danville, Va.
G. W. Chamberlin, Monte Vallo, Ala.
William Fonde, Mobile, Ala.
H. C. Maddux, Washington, D. C.
Robert Foster, Staunton, Va.
Harold Faust, Upper Darby, Pa.
Mildred C. Saylor, Coffeyville, Kans.
Janet Kindall, Newton Center, Mass.
John Powers, Pleasantville, N. Y.
Max Brandt, Biddeford, Me.
G. H. Lauriat, Boston, Mass.

Lois Chase, West Roxbury, Mass.
Joseph A. Poland, Cresaptown, Md.
Julian J. Keenan, Wynnewood, Pa.
Harold Stretch, Larchmont, N. Y.
John B. Hunter, Upper Montclair, N. J.
Edward Poore, Passaic, N. J.
Moreau Thompson, Kansas City, Mo.
Eldrid Johnson, Chicago, Ill.
Mary Fant, Bristol, Va.
Elle Gordon, Bristol, Va.
Amander Moon, Montgomery, Ala.
Jane Wesson, Louisville, Miss.
Mary Joel Weil, New Orleans, La.
John Howard, Michillandi, Mich.
Leslie Busch, Washington, D. C.
Robert W. Davisson, Harlem, Ga.
F. L. Ketcham, Champaign, Ill.
George Brenner, Brooklyn, N. Y.
William H. Seaman, Factoryville, Pa.
Joseph Olton, Harrison, Me.
Jack Logan, Upper Montclair, N. J.

NOW IS THE TIME TO REAFFILIATE FOR 1931

WITH the fall program of Junior Rifle Corps competition, including the complete course of Junior qualifications for fourteen distinct decorations in seventeen stages, the biweekly plan of team matches in three short series well under way, it is now time to give some thought to 1931 reaffiliations. Affiliated members and clubs are in good standing for the calendar year and these affiliations expire at midnight, December 31.

To avoid any possible delays or interruption in program it is suggested that members and clubs reaffiliate well in advance of the new year. By co-operating in this respect early you also can help your home organization to eliminate much of the added detail and load that generally occurs at that season of the year.

For clubs in good standing it will not be necessary to go through the many details experienced when first making application for affiliation. All that is needed is a revised list of active members and officers with their home addresses and the \$5 reaffiliation fee.

Individual members who do not have an official application handy may simply submit their name, address, and age along with the 25-cent membership fee. These members will then receive a new 1931 membership card and will be eligible to compete in the program for another year.

The Gopher-Shooter

By WM. H. BRADDOCK

"WHAT'S that thing?" The tone was no more scornful than proper pride requires of a young man, not much under fourteen, who perceives an acquaintance wearing something splendid which he himself does not possess, and which, therefore, must on no account be acknowledged as impressive. In short, it was meant as courteous interest, and was so accepted by the wearer of the decoration.

"Oh, that!" The chest behind the glittering bauble swelled visibly. "That's only my Sharpshooter badge. Just got my first bar—that's this—yesterday."

"How much did it cost?"

"Cost? Huh, the whole thing only cost four bits, but *you* can't buy one for a million dollars!"

"Why can't I?" with instant hostility. "Guess I can if I want to!" No self-respecting youth can endure to be told what he can't do.

"You gotta be a member of the Junior Rifle Corps, and then you gotta shoot!"

"Huh, I reckon I can shoot as good as you can! I've shot lots and lots of gophers!"

"Is zat so? Well, come along with me, and I'll show you somep'n harder'n gophers to shoot."

"Aw, there ain't nothin' harder to shoot than gophers, 'cep' jack rabbits. Where you goin'?" as they started off together.

"To my shootin' club. Gotta be there at half-past three, or I miss my turn."

"Where's that?"

"Well, pretty soon we're gonna be downstairs in the High School building, because we're gettin' crowded. But right now we're shootin' in the basement of Mr. Thwaite's house. He's the English teacher, you know, and our club instructor."

"Huh, what does an English teacher know about shootin'?"

"Mr. Thwaite? Say, you ought to see his medals! And he has a big *bearskin* that he shot in *Alaska*!"

"No; is that so?" Then, instantly, "Bet it ain't real!" Awe may properly be exhibited upon extreme occasion, but it should never be excessive.

"Naw, it's sure enough real. My dad's seen it, and he knows."

* * * * *

"Mr. Thwaite, this is Earl Whitcomb. I brung—brought him along as my guest, if you don't mind. Will you let him shoot? He's shot lots and lots of gophers."

"Fine! Glad to have you, Earl. Is your father willing?"

"Oh, my dad likes me to shoot, but he's out on our ranch. I live with my aunt, here in town, while I'm going to school."

"Your aunt doesn't know? Here, Dick," scribbling on a pad, "take this upstairs to Mrs. Thwaite. She'll telephone to Earl's aunt. What's her name and number? You ought to

have had this all fixed up, Dick." Then, as Dick departed with a mumbled excuse, "Why do you shoot gophers, Earl?"

"They eat our crops. Dad, he pays me half a cent for every gopher, and two cents for a jack rabbit. But I ain't got me any jacks, yet."

"Jacks are not easy shooting. I just asked, because in this club and the JRC, we don't believe in shooting harmless animals, or song birds. How much have you made on your gophers?"

"Four cents," bashfully. "And I got half a cent coming."

"That's fine!" They lapsed into silence, while Earl took in the room. It was a long, dark cellar, lit by electricity, and rather crowded with three ranges, and some sixteen or eighteen boys. The famous bearskin was not in evidence—it would be upstairs, of course—but there was a glass case hanging on the wall. Earl longed to ask Mr. Thwaite if those were his medals, but the silence was a little intimidating. These fellows seemed to take their shooting seriously. And then Dick returned.

"All right?"

"Yes, sir. Here's your note. Mrs. Thwaite wrote on it."

"Good. You can take Earl to No. 3, as soon as Wright is through. Remember, being your guest, he shoots as he pleases, except as to safety, of course. By the way, Earl, we don't believe in allowing accidents to happen. Harris, there," indicating a youth wearing a red sash, whom Earl had already recognized as a senior, seen once or twice on the campus, "is range and safety officer, and absolute boss while decorated like that. Even I have to obey his orders."

"Freshmen obey orders at all times," grinned Harris, as Earl settled down, trying to imitate the prone position that most of the others were using, and to beat Dick. But Mr. Thwaite's comment on seeing the target was disappointing.

"Not bad at all, Earl, for a beginner. You could shoot the first two grades quite easily. Sharpshooter gives more trouble, but I think you might do it, with an afternoon's coaching, perhaps."

"Two of those shots would have got a gopher, Mr. Thwaite. And I think I could do better standing, and with my own rifle. This one is too heavy."

The instructor smiled quietly, and took a target from a lad who came up just then. Earl knew him as Jim Thorsen, a classmate whose home was in the town.

"We have a light rifle, and you may use it for your next string. Look at this target."

Earl looked, and whistled softly. "Every one through the head!"

"That's it; that's exactly it! It's unsportsmanlike to merely wound an animal." He began counting: "42, Jim. Very fine indeed; was that what you made it? He scored the

target again, and then signed it at the bottom. "Fill it out, Jim and put it in the box."

He turned to the visitor, while Jim wrote, laboriously, and grinning the while from ear to ear.

"You see, Earl, some of the fellows who live in town, like Jim, here, and your friend Dick, have been shooting in the JRC for a couple of years, more or less. Now they're trying to turn in scores like this one. Every ten targets gives 'em another bar."

"What's that, Mr. Thwaite?" Earl had forgotten Dick's badge.

"Go and look at the medals in that glass case, yonder. They're all labeled. Bars like those on that long, gold-colored one."

There were a good many medals in the case, and they made an impressive show. Earl was trying to puzzle out the labels, and wondering whether the "long one" was really gold, when a voice spoke over his shoulder.

"Pretty nifty, eh?"

It was Harris, and, as sharp eyes noted instantly, without the gorgeous red sash. He laughed a little, understanding the glance. "No, I've done my time today, as range officer. Jackson has the job now."

"Do you mind telling me what that long one is? The label says it's yours."

"Oh, that's the ladder you climb up to get this," indicating an enameled medal on his jacket. "Now I'm working for a bar to this. I'll show you, in a minute, when my turn comes." There were some piles of papers on a little shelf under the case, and he began to take one of each.

"Here, put these in your pocket, and read 'em later. They explain everything. One's an application blank, in case you want to join. If you fill it out and give it to me, I'll see it doesn't get lost. Guess it must be about my turn, now."

So Earl had a chance to see a target shot for the Distinguished Rifleman bar, which takes real shooting. It was a good one, as it happened, and he whistled again when the fine points were explained. It had never occurred to him that such shooting was possible. But he was not quite ready yet to surrender.

"When you're shooting gophers, you haven't time to go down on your belly."

"I'll have to shoot a few targets almost as good as this offhand, standing, before I get through," remarked Harris, dryly. "But I know what you mean; we suffer from rock-chucks, down our way. You mustn't get shooting mixed up with the judgment of speed and distance, with a moving target. They're not the same thing at all; and judgment's no use unless you can shoot."

"Say, Mr. Harris, you're some shot, aren't you?" Earl blushed violently, as he realized he had spoken his thought aloud.

"Oh, I've made a fair start, but I'm not so

hot. You ought to see some of the scores made in the National Champ."

Before Earl could inquire what that was, he was told it would be his turn next. With the lighter rifle, he shot standing; but to his amazement the score was lower than before. He couldn't understand it, for down in his heart he knew he was shooting at least as well as he ever had on the ranch. He hinted as much to Harris, who laughed.

"You're just finding out what real shooting is," and he went on to point out some of Earl's mistakes. The next string—prone, this time—showed improvement.

"You see?" commented Harris, and Earl did see, a little. "I'll coach you some more, next string. It'll be worth several points to you."

It was, but even so, Earl couldn't come within three points of Dick's lowest score. Harris's approval, however, was sweet consolation in his humiliation.

"You'll make a darn good shot, kid, one of these days, with training and practice," he vouchsafed, after the last string. "You've done well, for a beginner. Better join the club, and do some shooting."

"I sure will, if they'll let me. But I ain't—I'm not a beginner. I've done a lot of shooting."

"Uh-huh, you've learned a lot of things wrong, that you have to start by un-learning," Earl felt a trifle dazed, with all the totally new ideas the afternoon had brought him, but even this wasn't the last.

Mr. Thwaite looked up from Dick's final target with a queer smile. "37, Dick; 38 at the very best. Haven't made a 40 today, have you? Want to know the reason? Dick didn't seem anxious to, but the instructor went on relentlessly: "Shooting is a state of mind, as you may have heard me say before. You came in, all set to show Earl how good you are. Can't shoot with a swelled head, Dicky."

It was two very sober and subdued youths who said goodbye and left, Earl with one careful hand on the precious papers in his pocket. They didn't see the strange expression on Mr. Thwaite's face, as he watched them go up the steps to the street. Probably they wouldn't have understood it if they had.

MOSTLY PERSONAL

Rifle-shooting proved so popular among the campers of Camp Burke, Preston, Okla., during the past season that Scout Executive G. Earl Silver has completed plans to continue throughout the winter months. The camp is located but 6 miles from the Okmulgee Boy Scout Headquarters and will be accessible to the

entire council for the most part. A number of boys qualifying during the summer attended camp from different parts of the council and arrangements will be made to go to these districts once a month for a shoot.

The following is a list of recent additions to our list of commissioned instructors. These leaders have satisfactorily completed all requirements for each of the ten lessons, and several of them have in addition submitted qualifying targets for the instructor's award:

Ross M. Hays, Caney, Kans.
P. S. Johnson, Nashua, N. H.
Charles Workman, Chicago, Ill.
Edson W. Hall, Hollister, Mo.
O. W. Olson, Silverton, Ore.



Sharpshooter Susan L. Cole, age 10, of Sandy Hook, Conn., on the range qualifying for her first Expert bar

E. W. Craik, Charleston, Ind.
William Seigle, Cottonwood Falls, Kans.
L. P. Robson, Syracuse, N. Y.
Gwen Whitmore, Roxbury, Vt.
Virginia Kraft, Bristol, Va.
Floy A. Sample, Cornish, Me.
S. N. Ekdahl, Austin, Tex.
Mary J. Chase, Mayfield, Mich.
Edward N. Lidgen, Chicago, Ill.
Edward G. Brueckmann, Baltimore, Md.
Leslie H. Carle, Green River, Wyo.
Glen C. Hickie, Jacksonville, Ill.
Richard Doty, McVior, Mich.
Margaret R. Pace, Brevard, N. C.
H. Madeline Rowe, New Haven, Conn.
Robert E. Wood, Lawrence, Kans.
Roswell Graves, Madison, Wis.
Olin S. Eakins, Patriot, Ind.
Orville D. Pote, Halstead, Kans.
Walter Dunsing, Brooklyn, N. Y.
Harry Foster, Reading, Mass.
A. T. Dunham, University City, Mo.
Claude E. Roderick, Fort Scott, Kans.
Horace Williams, Jr., St. Petersburg, Fla.

Dorothy Chapman, Ridgewood, N. J.
William Hart, Hillburn, N. Y.
Charles A. Hanes, Ambler, Pa.

CAMP QUALIFICATIONS

DURING the summer season in the 323 boy and girl private and institutional camps affiliated with the N. R. A. Junior Rifle Corps rifle-shooting played a prominent part in the program of activities. Many new camps have taken on this program for the first time, and thus help to establish a new qualification record of better than 16,000 decorations.

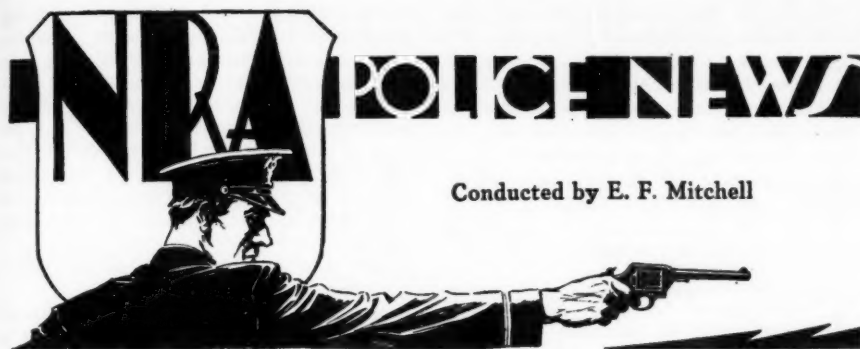
Brown Memorial Camp, of Abilene, Kans., again led the field of camps qualifying members with the rifle, presenting 666 diplomas and awards. This betters their record of a year ago, when 515 qualified. Camp Wood, of Elmdale, Kans., long a leader in qualifications, although far bettering their qualification standing of 397 of a year ago, again came second in standing with 518 decorations. Camp Greenbrier, of Alderson, W. Va., runner-up in the boys' division in the National Camp Matches, boosted their total of individual qualifications to 440 for third place in standing.

Camp Mary Dell, sister camp to Brown Memorial, was high girl camp in standing with 342 decorations. Camp Lincoln, of Hubert, Minn., also came in the 300 class with 316 awards. Eight other camps qualified better than 200 campers, while 29 awarded better than 100 decorations.

In tabulating the figures the pin decorations have not been considered in the totals, as in practically every case they were accepted by campers in addition to the medal awards.

The records to date, although incomplete in many instances, due to failure on the part of many directors to submit returns, follows:

Camp and location	Medals	Pins	Bars
Abena, Belgrade Lakes, Me.	52	21	31
Abenakis, China, Me.	24	..	..
Abnaki, North Hero Island, Vt.	110	27	..
Agawam, Crescent Lake, Me.	45	..	15
Alleghany, Ronceverte, W. Va.	133	48	59
Androscoggin, Wayne, Me.	65	50	23
Apache, Conway, N. H.	4	..	..
Arbutus, Mayfield, Mich.	63	49	6
Arcudia, Casco, Me.	37	31	..
Baiting Hollow, Port Jefferson, N. Y.	24	..	..
Barta, Casco, Me.	19	..	..
Bedford, Bedford, Ind.	171	18	6
Birch Rock, East Waterford, Me.	55	53	15
Black Bear, Marion, N. C.	31	..	7
Bon Air, Sparta, Tenn.	11	..	..
Bonaventure, New Mills, N. B., Canada	30	..	..
Brookbay, Bath, Me.	23	..	..
Brooklyn Scout, Narrowsburg, N. Y.	69	..	8
Brown Ledge, Mallets Bay, Vt.	38	..	..
Brown Memorial, Abilene, Kans.	649	..	17
Burke, Preston, Okla.	38	..	2
Calumet, Canaan, N. H.	45	..	..
Care Away, Galena, Mo.	208	15	73
Carolina, Brevard, N. C.	20	..	..
Caulbe, Benedict, Kans.	102	..	2
Chapman, Ardmore, Okla.	27	13	..
Cheley Colorado, Estes Park, Colo.	64	..	81



Conducted by E. F. Mitchell

Toledo Police Officer Wins Championship

ON SUNDAY, August 24, the Toledo Police Department conducted their Annual Championship Pistol and Revolver Match on the Toledo police range at Bay View Park.

This shoot, which has formerly been known as the "Annual Ohio State Pistol and Revolver Championship," was this year sponsored by the National Rifle Association, and had the approval of A. D. Black, Director of Public Safety, Chief of Police Lewis J. Haas, and Inspector Joseph Delehaunty. Police Instructor Charles Hennessy supervised the range details.

There were two matches, consisting of a match open to any individual, and a team match consisting of teams of five men from any of the following: Military organizations, including Ohio National Guard, civilian or college clubs within the State of Ohio, and any regularly organized police departments of any city in the United States. The Individual Match started shortly after 9:30 a. m. with 104 men being entered. The Team Match started early in the afternoon with 17 teams being entered.

The course of fire consisted of 50 yards, slow fire, 2 scores of 5 shots each, 1 minute per shot; 25 yards, timed fire, 2 scores of 5 shots each, 20 seconds per score; 25 yards, rapid fire, 2 scores of 5 shots each, 10 seconds per score.

The arms used consisted of any pistol or revolver, caliber .32 or larger, as sold by the manufacturers, provided that for the purpose of suiting the grip to the hand of the individual it may be taped and a small block may be fitted behind the trigger guard. Target sights suitable for the holster wear may be used. Barrel length not greater than 6½ inches; trigger pull not less than 3 pounds.

The standard American 50-yard target was used for slow fire, and the standard American rapid-fire target was used for both the timed- and rapid-fire stages.

R. N. Otey, member of the Toledo Police Department, won first place, and a gold medal in the Individual Match, with a score of 277 x 300, getting away to an 87 in the slow fire from the 50-yard line, and coming through with a 95 timed fire and a 95 rapid fire from the 25-yard mark. Close behind him as a runner-up was A. E. Boring, of the U. S. Navy Team, who fired 276, compiling his score

with an 88 slow fire, and 94's at timed and rapid fire. The Team Match was won by a quintette of straight-shooting sailors from the U. S. Navy. These boys defeated crack U. S. Infantry, Cavalry, police, and civilian teams, securing a total of 1,323. Lieut. B. Bartlett was high man of the team with a score of 281, closely followed by A. Boring, who had a score of 272, while C. E. Hendricks and E. P. Amey both shot a total of 259, with E. A. Elgin getting 252. The Toledo Police No. 1 Team was the runner-up in the Team Match, finishing 3 points behind the Navy with a score of 1,320, Officer Ken Larson being high man on the Police Team with 275, followed by Sam Otley with 268, Clint Knudel 265, O. J. Tobey 257, and Walter Hoffman 255.

The scoring was taken care of by a detachment of Marine Corps Reserves, and the range officer was Capt. Cecil Stickney, U. S. M. C. Reserve, and he was assisted by Howard Fashbaugh, of Monroe, Mich.

The pit details were taken care of by traffic officers from the Toledo Police Department under the supervision of George Fackelman.

The N. R. A. was represented by E. F. Mitchell, manager of the Police Division, together with F. C. Ness and W. R. Nicholson.

INDIVIDUAL MATCH (104 Entries)

No.	Name and organization	Score
1.	R. N. Otey, Toledo Police a	277
2.	A. E. Boring, U. S. Navy b	276
3.	J. B. Jensen, U. S. Cav. c	270
4.	Alfred Hemming, Detroit Police c	270
5.	Ken Larson, Toledo Police c	269
6.	A. Birchner, Toledo Pistol c	269
7.	Claude Shaylor, Portland Police c	268
8.	J. H. Overbaugh, Del. & Hudson R. R. c	267
9.	Sam Otley, Toledo Police c	267
10.	J. H. Young, Portland Police c	266
11.	R. S. Marshall, Lima civilian	266
12.	J. E. Davis, Los Angeles Police	264
13.	E. P. Amy, U. S. Navy	263
14.	J. O. Dircks, Los Angeles Police	263
15.	John Bout, Hartford Police	263
16.	Andrew Bodnar, Detroit Police	263
17.	Ray Bracken, Columbus civilian	263
18.	S. E. Elgin, U. S. Navy	262
19.	Capt. J. J. Haag, Seattle Police	262
20.	R. J. Nowka, Los Angeles Police	261
21.	Jas. Parks, Detroit Police	261
22.	Lt. H. Harrison, Gypsum Club	261
23.	Harold Poole, Detroit Police	260
24.	Leo Grateofsky, Del. & Hudson R. R.	259
25.	C. E. Hendricks, U. S. Navy	258

a Gold medal. b Silver medal. c Bronze medal.

TEAM MATCH (17 Entries)

No.	Team	Score
1.	U. S. Navy a	1,323
2.	Toledo Police No. 1 b	1,320
3.	Los Angeles Police b	1,311
4.	Del. & Hudson R. R.	1,298
5.	Portland Police	1,291
6.	Detroit Police	1,284
7.	Seattle Police	1,281
8.	Toledo Pistol and Rifle Club No. 1	1,229

9.	Hartford Police	1,227
10.	U. S. Infantry No. 1	1,210
11.	U. S. Navy No. 2	1,203
12.	Toledo Police No. 2	1,199
13.	Newport News Police	1,184
14.	Toledo Pistol and Rifle Club No. 2	1,175
15.	Saginaw Police	1,145
16.	U. S. Infantry No. 2	1,125
17.	Pittsburgh Police	1,054

a Silver medal. b Bronze medal.

DEPUTY SHERIFF WINS THOMPSON SUB-MACHINE GUN MATCH

J. F. GUY, deputy sheriff of Columbus, Ohio, won the Thompson Sub-Machine Gun Match, held at Camp Perry, making a possible score of 75.

The Thompson Sub-Machine Gun Match was open exclusively to police or law officers who were enrolled in the Police School. This match created a great deal of interest, there being 91 police officers entered in the event, which was the first of its kind ever held in this country. The course of fire was 10 shots rapid fire at a distance of 100 yards, and 5 shots quick fire from a moving vehicle. The runner-up in the match was W. F. Peach, a Newport News, Va., police officer, with a score of 65, while third place was taken by C. D. Fletcher, one of the officers from the Nation's Capital, Washington, D. C. It is interesting to note that from the team of fifteen police officers sent by Washington four of them finished in the first eleven places, scoring 50 or better.

The winner, Deputy Sheriff Guy, was awarded a Thompson sub-machine gun, this being presented by the manufacturers of this weapon, but the gun does not become the personal property of the winner, but is made a permanent weapon of the department which the winner represents.

KANSAS CITY POLICE OFFICER WINNER OF HOGAN'S ALLEY MATCH

THE Myers Match, which requires that the police officer fire 5 shots at targets that suddenly appear in windows and as suddenly disappear, coming into view from behind the door or the chimney of buildings, and which simulates actual conditions of gang warfare, was one of the most interesting matches which the police participated in while at Camp Perry. Each policeman is allowed 5 shots at targets appearing at irregular intervals, and the hit must be in a vital spot in order to count 5, the target which is used being the Colt Police Silhouette Target.

The match this year was won by J. A. Heillman, Sr., of the Metropolitan Police Department of Kansas City, who made the wonderful score of 24 x 25. Close behind him were Officers T. R. Saunders, of Wilmington, Del., and E. J. Dobberty, of Rochester, N. Y., both of these officers making a score of 23.

There were 96 police officers entered in this match, and the winner was presented with a caliber .38 Colt Officers' Model revolver, this being presented by Col. Hu B. Myers, who for the past three years has been the Executive Officer at Camp Perry, but now having retired from the Army is the Superintendent of Police in New Orleans, La.

(See following page for more police information.)

TEXAS POLICE CHIEFS CONVENTION INCLUDES PISTOL CONTEST

AS A CLOSING event of the three-day convention of the Texas Police Chiefs and City Marshals Union, held at Beaumont, Tex., prizes for winners in a number of pistol contests were awarded at the barbeque chicken dinner.

San Antonio Pistol Team was awarded the silver loving cup for high score among seven quintets with a score of 1,392 points out of a possible 1,500. Other teams in order follow: Austin, 1,368; Dallas, 1,352; El Paso, 1,322; Houston, 1,306; Wichita Falls, 1,304; and Beaumont, 1,232.

Jim Ingram, Chief of the Ranger Police Department, with a score of 285, was awarded the cup for the best individual shot for contestants not members of a team. A. S. Minstead, a member of the San Antonio Pistol Team, with a score of 289 out of a possible 300, was the highest scorer. Mrs. I. E. Nitschke, of Austin, with a score of 186 out of a possible 200 points, won the loving cup offered in the ladies contest.

POLICE FROM FORTY-TWO AMERICAN CITIES REPRESENTED AT CAMP PERRY

NEVER before has there been so enthusiastic a response to the offer of the police training given at Camp Perry. The fact that there were 148 police officers enrolled in this school proves that the benefits received from this training more than offset any expense incurred for the transportation and subsistence of the officer who goes to Perry.

The purpose of this school is to provide instruction for American peace officers, and students in the Police School return to their home departments thoroughly qualified to instruct in the latest methods of combating the bandit.

This school approaches the crime problem from every angle, and while crack shots are encouraged to become more proficient, marksmanship being an important part of the instruction, yet always the aim of the training is to see that each student has absorbed the instruction in all of the courses.

This year the following cities were represented by individuals, groups, or teams: Baltimore; Buffalo; Chicago; Detroit; Hartford, Conn.; Lexington, Ky.; New Orleans; Newport News, Va.; New York; Pittsburgh; Portland, Ore.; Rochester, N. Y.; St. Louis; Saginaw, Mich.; Springfield, Ohio; Bridgeport, Conn.; Seattle; Toledo; Wilmington, Del.; Washington, D. C.; Los Angeles; Allendale, N. J.; Chattanooga, Tenn.; Escanaba, Mich.; Elgin, Ill.; San Francisco; West Palm Beach, Fla.; Okmulgee, Okla.; Davenport, Iowa; Covington, Ky.; Dante, Va.; Monroe, Mich.; Dearborn, Mich.; International Falls, Minn.; Johnstown, Pa.; Jackson, Mich.; Kansas City, Mo.; Milwaukee, Wis.; Muskegon, Mich.; Cleveland, Ohio; Cushman, Mont.; and Pocatello, Idaho. In addition to these cities the Michigan State Police, Pennsylvania State Highway Patrol, and the Delaware & Hudson Railway Police were represented.

Among the officers enrolled in the Police School were two chiefs of police; one, Mr. W. J. Reimer, Chief of Police at Allendale, N. J., and the other, Mr. Ray Bryan, Chief of Police at Chattanooga, Tenn. Both of these chiefs were greatly impressed with the Police School and the opportunities that are afforded to those who take advantage of the school.

ABOUT STOCKS

By W. F. ROPER

THERE are two things I'm sure of about special stocks for handguns—single-shots in particular. First, the only way to get a pair of stocks such as you have decided you need is to make them yourself. No matter who else you have make them, they won't be the fit you want.

The second thing I've found out about stocks—and I've worn out a real supply of jackknives, files, etc., making them—is that the greatest danger in the grip business, is to overdo the perfectly good idea you may have had.

Personally, I don't think that the value of a grip is dependent at all upon how well it provides grooves and humps to make it fit every bump and hollow in your hand. I have found that the principal benefit of special grips is that a correctly shaped pair will cause your hand to assume a position in relation to your wrist which for you gives the steadiest hold with the least strain.

So far as there being any advantage in providing grooves for each finger and a rest for your thumb, I don't believe they are worth the effort.

The matter of what is the best angle for your hand to take in relation to your wrist is decidedly important, however; and obtaining a grip of the proper angle will make consistent shooting a little easier for you.

Remember this: it is your particular case the stocks must fit, and if you decide to find out what gain can be made, get some soft pine, some sharp knives, some sandpaper and files, and go to it. Don't try to have someone else make them for you. It's a waste of time.

A GOOD SHOT

By HARVEY PAYNE

THE best shot I ever saw was made during the Boer War in South Africa, combining, as it did, all the important qualities of military marksmanship—accuracy, judgment of distance, windage—and it was a snap shot with the exact target named in advance.

My regiment—the Cape Mounted Rifles—was camped one Sunday morning about three miles north of a small creek in the Northern Transvaal. A Boer command was camped a similar distance south of the creek. For some reason, best known to themselves, the Boers rarely fought on Sundays, unless we carried a fight to them; and we were generally glad enough of a day to rest and cleanse ourselves.

Sergeant Jay of my squadron (a man who was very proud of his shooting) and I started out for the creek to bathe. He

carried his rifle—a Lee-Metford—it being compulsory for all ranks below commissioned officers to be armed at all times. As we approached the creek I noticed a man standing on the opposite bank. Adjusting my binoculars I saw that it was a big Boer with a long beard. At each side of him was a bucket, while he himself was filling a pipe. Bert had wonderful eyesight and saw almost as much without as I did with the glasses.

"Bet you a crown I can hit him, sir," said Bert.

Never dreaming for a moment that he could do such a thing I answered, "It's a bet." Then I asked him, "What's the distance?"

"A thousand yards," answered Bert promptly. It was plain veldt country and there wasn't even a rock by which to calculate. Jestingly I said, "Where are you going to hit him?"

"The heart," Bert answered instantly.

He lay down, lifted the leaf of his back sight, ran the bar to a thousand yards, wet his finger to get the wind—there was quite a considerable westerly breeze—threw a cartridge into the breach, aimed carefully and fired. I was watching through the glasses and saw the man reel a little, then drop.

I felt an awful compunction for having made such a fool bet; but I had never dreamt that Bert could do anything but startle the man.

We hurried down to the creek and found the man to be stone dead—shot clean through the heart. I very willingly paid my crown for the privilege of witnessing what I consider to be the best military shot I ever saw made. The old Lee-Metford was none too accurate, either, and very shortly afterwards was replaced by the Lee-Enfield.

THE INTERNATIONAL MATCHES, 1930

(Continued from page 36)

ity that it tore down many of the decorations around town, blew out shop windows, and for a while threatened more serious damage.

On this match we knew that we were up against a tough proposition, as the Fins in particular had been showing that they were most excellent shots prone, and we rather thought that indications pointed to a win by them. In this we were wrong—they did beat us, but Denmark beat them. The match ended in improving weather, with the following results:

First place and Championship, Denmark, 1,926 points.

Second, Finland, 1,924.

Third, America, 1,900. Seitzinger, 386; Renshaw, 385; Swanson, 380; Bruce 379; Fisher, 370.

Fourth, France, 1,888.

Fifth, Belgium, 1,844.

Sixth, Holland, 1,822.

Leskinen and Lindgren, of Finland, tied for Individual Championship with 392. Lindgren with 33 10's won over Leskinen with 32.

A description of the 300-meter match and the winning of the Argentine Cup will be given in the concluding installment of this article.



DIRECTOR CIVILIAN MARKSMANSHIP

Conducted by Lt.-Col. J. M. Coward

ADDRESS: DIRECTOR CIVILIAN MARKSMANSHIP, WAR DEPARTMENT, WASHINGTON, D. C.



SHIPPING TICKETS

MANY unsigned shipping tickets covering property shipped to rifle clubs during the present calendar year are still in the hands of club secretaries. Numerous efforts have been made by the office of the Director of Civilian Marksmanship to have club officials submit these shipping tickets, in order to complete the clubs' files. The shooting year is drawing rapidly to a close, and unless the club files are complete on December 31 of this year, shipping instructions for the return of the Government property will be issued to all such delinquent clubs. During the last fiscal year ending June 30, 1930, 274 clubs were disbanded, many of these for reasons outlined above. With the constantly growing demands by new clubs for equipment, every effort must be made by this office to require moribund and inactive clubs to return the Government equipment in order that it may be subsequently issued to one of the hundred or more new clubs now on the waiting list. With this object in view a more vigorous campaign is being conducted against those clubs that have not been actively engaged in target practice, or have lost enthusiasm in shooting. Many clubs find it so much easier to follow the line of least resistance, thereby drifting into a state of absolute inactivity, finally resulting in a complete loss of interest, while others through sheer force of effort overcome all those obstacles which stand in the way of progress and produce records and results which are very creditable and commendable. This office is very desirous that all of the 1,600 rifle clubs now being carried on its rolls shall be live and enthusiastic, and devote more time and energy to rifle marksmanship. If the club officials will endeavor to co-operate with this office with that end in view, it is quite evident that much needless correspondence could be eliminated, and the club's records could always be complete.

ANNUAL RETURNS AND REPORTS OF FIRING

SOME TIME during the month of December there will be mailed to every rifle club blank forms for submitting the Annual Return of Property and the Annual Report of Firing. These forms are very essential as a part of the club's files in this office. Great care should be exercised in their preparation. Efforts should be made to prepare the data for these reports in advance. All Government property should be checked and shortages

noted in order that the account may be settled without delay, as no subsequent issues can be made until all property shortages are settled. The Annual Report of Firing is a brief history of the club's activities during the year. It should be brief and concise, yet at the same time clearly state the information required. The prompt and careful consideration given to the execution and submission of these reports will greatly expedite the issues of supplies for the year 1931.

REPORTS OF QUALIFICATION

IN SUBMITTING reports of qualification with the rifle or pistol, club secretaries should list only the names of those firers who qualify as Expert Riflemen, Sharpshooters, or Marksmen, or as pistol Experts, Sharpshooters, or Marksmen. Those members of rifle clubs who fire the qualification course with either the rifle or pistol and fail to qualify should not be entered on the reports submitted to this office. An accurate record of all members participating in rifle marksmanship during the calendar year 1930 should be kept, regardless of whether they qualified or not, as the basis of next year's issue of ammunition is based on the number of members of a club actually participating in rifle marksmanship, and not on the club's total membership, unless the total membership fired. In listing the names of members qualifying, the *first, middle, and last* names should always be written in full, as "*William Henry Harrison.*" *Do not use initials.*

CHANGES IN CLUB OFFICIALS

THIS office should be advised immediately of all changes of address of club secretaries or other club officials having correspond-

ence with it. The names and addresses of all newly appointed or elected officers should also be promptly reported, as much correspondence addressed to club secretaries is being returned to this office on account of the postal authorities being unable to make delivery to the old address. Long delays are thus occasioned. In some instances club correspondence is sent to secretaries who had severed their connection with the club many months before, and in some few cases it becomes necessary to go through the club's files in order to locate the name of some member to whom the correspondence can be mailed. This routine procedure can be eliminated and greater efficiency can be effected if this office is promptly advised of all changes made in the official roster of the club.

DELAYED ORDERS FOR PURCHASE OF EQUIPMENT

OWING to the presence of a part of the clerical personnel of this office at the National Matches at Camp Perry, Ohio, a slight delay has been occasioned in the filling of orders for ordnance stores and equipment. Many of the orders received during the period of the National Matches were held until the return of the office personnel from Camp Perry. There has also been a delay in the shipment of supplies from Benicia Arsenal, due to the large number of orders which are being sent there for shipment. This is especially true in regard to Krag carbines. It is believed, however, that conditions should return to normal within the next month. If orders submitted during the month of September are not received by November 15, the purchaser should so advise this office. In the meantime every effort is being made to expedite the approval of all orders received.

HOW FAST CAN DUCKS FLY?

(Continued from page 30)

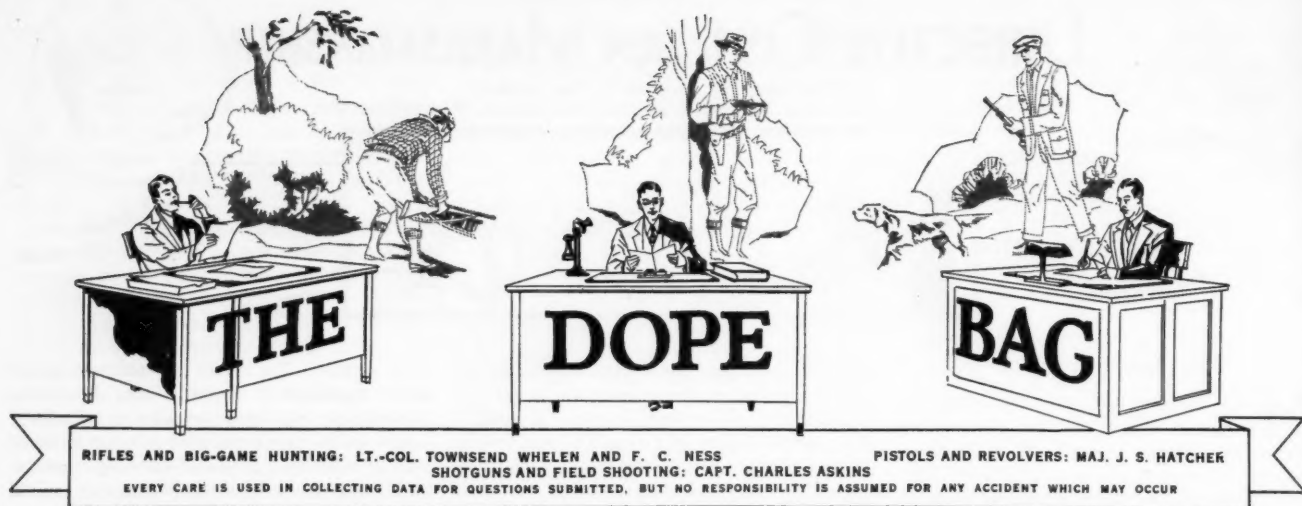
shows that exact data on ten of these factors were already available to assist the shooter.

The airplane tests above described add to this knowledge by giving definite information as to the eleventh item—that is, how fast ducks can fly.

There remains only the twelfth and final component. This factor will always be a variable that the shooter must evaluate for himself at the instant of shot—that is, in what direction and how fast the wind is blowing.

(The end)





A Free Service to Target, Big Game and Field Shots — All questions answered directly by mail

Elevations, Sight Settings, Etc.

By TOWNSEND WHELEN

AS I DO QUITE a lot of reloading for my .30-06 Springfield N. R. A. Sporter, and am not fortunate enough to have a range in this locality on which to compute the angles of elevation necessary for the following loads, would you please give me the information:

1. Ideal bullet No. 308334, 23 grains du Pont No. 80, 1,700 f. s. velocity.
2. Ideal bullet No. 311413 (Squibb gas check) 16.5 grains du Pont No. 80, 1,600 f. s. velocity.

3. Ideal bullet No. 308403 (Squibb-Miller), 12.5 grains du Pont No. 80.
4. 172-grain, 9-degree Service bullet, 45.5 grains du Pont No. 17½, 2,500 f. s.
5. Remington Hi-Speed bronze-point bullet, 150 grains.

I have quite a few long-range shots at game, and therefore desire the above information giving angles up to at least 600 yards. If you can not furnish this data will you kindly refer me to some textbook where it can be found?—E. R. McF.

ANGLES OF ELEVATION—.30-06 SPRINGFIELD, WINCHESTER MODEL 54, OR REMINGTON MODEL 30-S RIFLES

Range, yards	I 308334—198 23D80, M. V. 1,700 f. s.	I 311413—169 16.5D80, M. V. 1,600 f. s.	I 308403—167 12.5D80, M. V. 1,400 f. s.	173-gr. B. T. 45.5D17½, M. V. 2,500 f. s.	Remington 150-gr. H. S. M. V. 3,000 f. s.
100	4	4	4.5	2	2
200	12	13	16	5	4
300	21	22	31	8.5	6.5
400	33	37		12	9.5
500	47	54		15	12.5
600				19.5	16.5
700				24	20.5
800				30	25.5
900				35.5	31.5
1,000				41	38

TABLE OF ANGLES OF ELEVATION

Rifle	25 Remington	.250 Sav.	.30 Krag	.30 Springfield Model 1903
Range in yards	87-gr. Ptd. M. V. 2,850 f. s. (full jacketed) (min.)	101-gr. Ptd. M. V. 2,400 f. s. (min.)	87-gr. Ptd. M. V. 3,000 f. s. (soft point) (min.)	220-gr. R. N. M. V. 2,000 f. s. (min.)
100	1.5	2	2	4.5
200	3.5	5	4	9.7
300	6.5	9	7	15.8
400	10	14	11	23
500	15	20	16	31.6
600	21	27	22	41.2
700	28	35	29	52.9
800	36	45	38	65.8
900	46	57	49	80.1
1,000	58	71	63	96

Extreme range
in yards.
Barrel elevated
to 25 degrees.

3,450 5,700 4,500

From the above table, if the precise sight adjustment for one range has been determined, the elevation for any other range can be read off, provided the rifle is equipped with sights reading to minutes or half minutes of angle, such as the Lyman No. 48 rear sight, the rear mountings on Winchester A5, Lyman 5A, or Fecker telescope sights, or the O'Hare micrometer adjuster on the Model 1903 rear sight.

TOWNSEND WHELEN.

Answer (by Colonel Whelen). I am inclosing a table of elevation for the .30-06 loads mentioned in your letter. The first three columns are an approximation. They should, however, be accurate enough to enable you to get at least a close 3 and probably a close 4 on the first shot. They are continued to the extreme ranges to which these loads are accurate. The last two columns are practically exact.

Of course these tables will not tell you where to set your Lyman No. 48 sight. No table can do that. First of all, as you probably know, you have to obtain a basic elevation for reference by carefully sighting your rifle in with that load at, say, 100 yards, or, say, 200 yards. Suppose, when you sight in at 200 yards with the load given in the first column, you find the reading of your Lyman No. 48 rear sight to be 16 minutes. Then for that load your 200-yard elevation will be 24 minutes, and for 300 yards 33 minutes, because the table shows that a raise of 8 minutes is required with this load from 100 to 200 yards, and a raise of 9 minutes from 200 to 300 yards. The other inclosed matter will help to make this plain.

DIRECTIONS FOR ADJUSTING THE LYMAN NO. 48 SIGHTS ON THE .22-CALIBER MARK I, AND THE .30-CALIBER SPORTING TYPE OF SPRINGFIELD RIFLES

The modern trained marksman prefers to adjust his rear sight by minutes of angle, and not by yards, as this method is much more accurate and more convenient. The Lyman No. 48 sight furnished on the .22-caliber Mark I, and the .30-caliber sporting type of Springfield rifles, is a micrometer sight adjusting to minutes of angle.

A minute of angle subtends 1 inch at 100 yards, and proportionately at other ranges. Moving the rear sight 1 minute changes the point of impact 1 inch at 100 yards, 2 inches at 200 yards, 5 inches at 500 yards, or ¼ inch at 25 yards, and so on. Tables of angles of elevation are furnished for all of our accurate target and sporting cartridges.

The knurled head of the elevation screw on the No. 48 sight has five graduations, numbered from 0 to 4, each being a minute of angle. Between these graduations are lines indicating half minutes, which of course adjust to half an inch at 100 yards. The elevation slide on the side of the sight is graduated with lines 5 minutes apart. Turning the screw one complete revolution moves the elevation 5 minutes, or one graduation on the slide.

If the slide is between the second and third graduations (between 10 and 15) and the head at the figure 2, the sight reads 12 minutes in elevation. It is absolutely impossible for anyone to set the sights correctly for anyone else, as every man aims and holds the rifle slightly differently. No attempt is made to sight the rifle in at the factory. The marksman should therefore sight his rifle in by experimental firing until it is correctly sighted for a given basic range, so that the bullets strike in the center of the bull's-eye. It is most convenient to do this at 50 yards for the .22-caliber rifle, and at 200 yards for the .30-caliber rifle. Having once found the correct elevation in minutes of angle for one range, the approximately correct elevation is at once known for every other range by referring to the table below. For example, if one finds that when his .30-caliber rifle is correctly sighted for 200 yards, the sight reads 6 minutes, then the correct 300-yard elevation will be 3 minutes higher or 9 minutes on the sight. Moreover, if the marksman is shooting at 200 yards, and his bullets appear to be striking about 4 inches low, he has merely to raise his elevation 2 minutes, because at 200 yards 1 minute changes the point of impact 2 inches.

The windage adjustment is slightly different. The windage scale is graduated in points which have a value of 4 minutes, so that it will conform to the windage on the Springfield service sight, and permit us to use the windage tables which are provided for the service rifle. One point or graduation on the windage, therefore, is equivalent to 4 minutes, and changes the point of impact 4 inches at 100 yards, 8 inches at 200 yards, 1 inch at 25 yards, and so on. The windage screw has to be turned a complete revolution to move the windage 1 point or 4 minutes. This screw clicks 8 times for each revolution, each click thus being half a minute, and moves the point of impact $\frac{1}{2}$ inch at 100 yards, 1 inch at 200 yards, and so on. Of course, to take right windage, or to move the point of impact to the right, the windage screw must be turned so that the aperture will move to the right the desired amount across the face of the windage scale. Once the zero windage has been found for a rifle, the two screws holding the plate of the windage scale should be loosened, and the plate moved so it will read zero.

TABLES OF ANGLES OF ELEVATION

Yards range	.30-caliber rifle		.22-caliber rifle	
	30-06 cartridge 150-grain bullet	30 MI cartridge 150-grain bullet	22 long rifle cartridge	
	Minutes	Minutes	Minutes	
100	2.5	2	0	
200	5	4	0	
300	8	6	12	
400	11.5	11	21	
500	16	14	25	
600	21	18	30	
700	26	22		
800	32.5	27		
900	40	32		
1,000	48.5	37		

STICK TO .44 SPECIAL

I HAVE a .44 S. & W. Special (triple-locking) revolver, which I like fine, but I have been thinking of trying to get a cylinder fitted for this gun for the .44-40 cartridge, which gives me a little more muzzle velocity. But this is a rifle cartridge; and would it be safe in a revolver?

Will the S. & W. people fit a cylinder in this gun for the .44-40 cartridge, so I can change cylinders and use .44 special (interchangeable)?

Could I use high-speed cartridges in a revolver S. P. or M. P. bullet?

How does .44-40 compare with .45 Colt; .44-40 and .45 with .44 Special—I. e., for accuracy and muzzle velocity?

Would you advise going to this trouble and expense for the difference it would make?

My gun is No. 10696, with $6\frac{1}{2}$ -inch barrel and stag handles. What would it cost me to have this gun fitted with target sights?—G. O. Y.

Answer (by Major Hatcher). The .44-40 cartridge made for use in revolvers would be perfectly safe in your Smith & Wesson. However, you would have to have a new cylinder fitted.

There are two kinds of .44-40 cartridges—one made for use in either rifles or revolvers, the other made for use in rifles only. Do not use the latter kind in a revolver. You can tell by the label on the box.

Smith & Wesson will fit a .44-40 cylinder to the gun. Write to them for the price.

High-speed cartridges can not be used safely in the revolver.

The following tabulation gives the comparison of the .44-40 with the .45 Colt and .44 special:

	Bullet weight	Muzzle velocity	Energy	Penetration in $\frac{1}{2}$ -inch board	Shock power
.44-40	200	918	375	7	54
.45 Colt	255	770	330	6	54
.44 Special	246	770	320	8	47

The accuracy of the .44 special is considerably better than that of the other two cartridges; but the difference is not sufficiently great to be noticed by anyone but an expert marksman.

I would not advise going to the trouble of having the extra cylinder fitted, because the .44 special is the finest large-size cartridge made.

It is not possible to have your gun fitted with target sights. The target models come with target sights on them, but there is a very considerable difference in the construction of certain parts.

PARADOX GUNS—RENEKE BULLETS

AS A RECENT addition to membership in the N. R. A., you will perhaps pardon this question: On page 43 of the June RIFLEMAN you make reference to the use of solid bullets in shotguns. I have been for a long time of the opinion that the Paradox type of gun would do very well in the Canadian woods all the way from prairie to moose.

The trouble has hitherto been that English Paradox guns are frightfully expensive, and more particularly as to the ammunition.

You make mention in your article of the Reneke bullet. Won't you please advise me whether I can get such a bullet for use in an American shotgun, together with whatever details will be at your command regarding the accuracy, and especially the penetration in such a weapon. I have been told that a 12-gauge Paradox has not enough penetration for moose and that it is only good for knocking over wild boar. Hence your statement that such guns are being successfully used in Europe for moose and bear was of great interest to me.—W. B. W.

Answer (by Captain Askins). The Paradox gun, as I suppose you know, is quite

a different weapon from bullets in a shotgun. The Paradox is a smooth-bore, but with a rifled muzzle. I shot one of these guns that Frank Hoffman had imported, and it seemed to me that it should have killed anything short of rhino and elephants. I know that the gun had a hefty wallop at the back end, a surprising kick to me, accustomed to shooting shotguns with bullets in them. I wasn't used to the trigger pull and didn't shoot very well, but Frank shot that gun with both barrels, hitting just the same at 100 yards as though shooting a rifle. Nearly if not quite all the shots he fired, offhand, landed in a 6-inch circle. He told me that the energy developed was a bit over 4,000 pounds, and I believed it, having felt that gun when it went off. It kicked harder than a .404 Gibbs, and it is supposed to have a free recoil of around 40 pounds, which exceeds that of a 10-bore shotgun. I am confident that the Paradox will kill any kind of game that we have, including brown bears and moose. I suppose that it would pattern rather indifferently with shot; but I didn't try that.

About the Reneke bullets, these are made in Germany, and 50 of them are supposed to be on the road coming to me. Just when they will get here (Ames, Okla.) I do not know. These are the bullets used by hunters of big game in Finland, Norway, and Sweden. They are shot from an ordinary double shotgun, smooth bore. They undoubtedly kill bear, and European elk, which is simply our moose. The distances at which such game is killed are usually short, not exceeding 60 yards as a rule. The only question in my mind is how accurate such bullets will prove to be. I am told by a Finnish correspondent that some guns shoot these bullets well and some do not. I have enough different guns to try that out, if I get the bullets. I think the energy of these bullets will be far under the Paradox—possibly not much more than half the power developed by that arm—and muzzle velocities should not be over 1,400 feet, instead of the 1,800 feet of the Paradox. Yet, from the way a round bullet tears up a tree, I am betting that the Reneke kills the bear, if he is hit right. These Reneke bullets are hollow, and have wings or fans inside that catch the air and rotate the bullet, keeping it head on.

TARGET PISTOLS AND FLINCHING

WILL you kindly advise me if you know of a .22-caliber target pistol having a grip small enough so that a person with short fingers may reach around the trigger comfortably?

Can you prescribe a remedy for flinching when shooting a pistol?—R. D. C.

Answer (by Major Hatcher). In .22-caliber target automatic pistols there is not much choice of grips. About the only satisfactory pistols of this kind made in this country are the Colt and Hartford pistols, and these are both identical as to grip.

When it comes to revolvers, the case is a little different. You will find that the Smith & Wesson .32-22 revolver has a very small grip and you can reach the grip very easily even with short fingers.

A very good remedy for flinching is to get one of the Bull's-eye pistols which you see advertised in THE AMERICAN RIFLEMAN and practice with it. It shoots No. 8 shot by means of a rubber band; but it makes no noise and has no recoil, so that flinching would show up at once, and as there is no reason to flinch the habit is rapidly overcome.

CONCERNING POWDERS AND LOADS

SINCE I am interested in reloading ammunition, I enjoy reading your articles in the RIFLEMAN and other magazines. I get a lot of valuable information from them.

I will appreciate it very much if you will answer the following questions for me:

Referring to the May (1930) issue of the RIFLEMAN, page 13, the figures on ballistics of some of the match ammunition seem to be in error, as follows: Caliber-.30 Palma Match ammunition, lot No. 6. Powder charge, 51.2 grains I. M. R. 1186; mean I. V., 2,716 f. s.; mean pressure, 54,335 pounds. Caliber-.30 International Match ammunition, lot No. 7. Powder charge, 48 grains I. M. R. 1186; mean I. V., 2,715 f. s.; mean pressure, 47,105 pounds. Is the mean I. V. of the Palma Match and the International Match ammunition shown correctly, or what is wrong?

What is the lightest charge of I. M. R. 1186 powder that can be loaded in a .30-06 load with best results, using a 150-grain jacketed bullet; also 172-grain boat-tail bullet?

Is there a commercial powder which is similar in every respect to the I. M. R. 1186 military powder?

Is there any difference in the Hi-Vel powder shown in the "Ideal Handbook" tables, and the Hi-Vel No. 2 used by Frankford Arsenal in loading the International Match ammunition?—A. L. Z.

Answer (by Colonel Whelen). There is no mistake in the descriptions of Palma and International ammunition given in the RIFLEMAN, but the article neglected to state that the Palma ammunition was tested in a 24-inch barrel, while the International ammunition was tested in a 30-inch barrel. This accounts for the seeming difference in muzzle velocities. Thus, the .30-caliber Palma Match ammunition, lot No. 6, powder charge 51.2 grains I. M. R. No. 1186 powder, gave a mean velocity of 2,716 f. s. in the 24-inch barrel of the National Match rifle. The .30-caliber International Match ammunition, lot No. 7, powder charge 48 grains of I. M. R. No. 1186 powder, gave a mean instrumental velocity of 2,715 f. s. in the 30-inch barrel of the International Match rifle, in which it was designed to be fired.

I. M. R. No. 1186 powder is the same as I. M. R. No. 1185 powder, except that the grains of the former are cut 22 to the inch, and of the latter, 11 to the inch. So far as I know, No. 1186 powder has never been placed on the market in canister lots for individual reloading. So far as the individual is concerned, he could probably tell no difference between the results obtained with proper charges of No. 1185, No. 1186, and No. 1147 powders. I really think that perhaps I. M. R. No. 1147 powder is the best for reloading, because it loads with more uniform charges in powder measure. But none of these powders are ideal for use with 150-grain bullets. All three of them are designed to give the best results with 172-grain bullets, although No. 1147 also gives excellent results with 220-grain bullets. But for 150-grain bullets, I think you will get better accuracy and a higher relationship between velocity and pressure with du Pont No. 17½ powder.

There is a difference between the Hi-Vel powder shown in the "Ideal Handbook" tables and the Hi-Vel powder used by Frankford Arsenal, and probably a very decided difference. The Hi-Vel powder shown in the "Ideal Handbook" tables is from the standard lots of Hi-Vel powder which the Hercules Powder Co. sell to reloaders. The Hi-Vel powder used by Frankford Arsenal is a lot of Hi-Vel powder

which probably has different ballistics from the canister lots. The Hercules Powder Co., like all other powder companies, turn out many lots of powder in the course of a year. If they get a lot of powder which has exactly the same burning rate as that which they have standardized on for selling in canisters to individuals, they will probably put it aside for canister sale; but the majority of their lots will vary considerably in their burning. These they sell to Frankford Arsenal and the various cartridge companies, who, of course, control the size of the charge with their pressure guns and chronographs. It is never safe to take the number of grains of a certain powder loaded by any cartridge company as the standard to load by, because the powder may have an entirely different rate of burning from that powder which the individual obtains. It is far safer to take the "Ideal Handbook" tables. But to be absolutely safe, refer to the table which is on the canister that the powder comes in.

THE BROWNING IS RELIABLE

I WOULD like to know if the new Browning Automatic 12-gauge shotgun is reliable.—R. G.

Answer (by Captain Askins). I have your inquiry as to the reliability of the Browning automatic. The Browning is very reliable in its functioning, as are all the automatics invented by John Browning. It is merely a matter of balancing the back thrust on the bolt head against the action spring. Get enough pressure against that spring and the shell is bound to come out, and the mechanism is just as certain to place another cartridge in the barrel. The gun has to be in mighty bad condition to balk it, and I have been balked and have jammed a pump gun far oftener than I have ever seen an automatic jam. A man is not as good a mechanic, you see, as is a mechanism made of steel, and the latter works just as well when the shooter is excited as it does when he is perfectly cool about things.

THE VALUE OF A RIB

I WOULD like to know if a matted rib on a pump or automatic shotgun is necessary to have, and what advantages over the plain barrel.—W. A. H.

Answer (by Captain Askins). The rib, raised or solid, has no advantage so far as the shooting qualities of the gun are concerned. It is, however, a nice thing to aim over, gives a better line as to elevations, and after aiming over it one remembers better just where he held. I think that rib is nearly as much worth while as sights are on a rifle, yet a rifle would shoot precisely as accurately without the sights, and the shotgun will throw as good a pattern without the raised rib. It is all a matter of something to aim with.

THE SINGLE-ACTION COLT

WOULD you kindly give me some information on the single-action Army Colt? What would you suggest as to accuracy, best caliber, barrel length, its bad points and good points, etc.?

I purpose buying one, and desire a bit of authoritative information.—G. A. R.

Answer (by Major Hatcher). The single-action Army Colt has been manufactured and sold for well over half a century, and is manufactured in large quantities today. Because of its simple construction and

comfortable grip, and because of the great reputation it gained in early frontier days, it is still a favorite.

Notwithstanding its simple mechanism, there are certain parts which break frequently, the most common of which is the cylinder stop spring. Next comes the pawl spring, and after that the pawl itself. Another thing that breaks rather often is the half-cock notch on the hammer. The absence of this is no great disadvantage, however.

In spite of the liability of certain parts to breakage, it is possible to fire this gun afterward, and this feature is what endeared it to the old Westerner and frontiersman. If the full-cock notch on the hammer is broken off, or if the trigger nose is broken, it is only necessary to hold back the hammer with the thumb, letting it slip when the aim is taken. If the pawl or cylinder lock is broken, it is possible to rotate the cylinder into place by hand.

Another reason for the long popularity of this revolver in the West is its safety for use on horseback. Should a horse start at the report of a gun fired from its back, it is quite likely that the rider would let loose another shot if he is handling an automatic, and there is some danger of this with a double-action gun, but none at all with a single-action Army.

This gun is not well adapted for match shooting because the long hammer travel, heavy hammer blow, and other features prevent the finest target accuracy. Nevertheless, for ordinary shooting it is accurate enough, and will shoot far better than the average man can hold.

The best caliber in this gun is the .45 Colt.

CONCERNING BINOCULARS

AS I AM GOING to purchase a pair of glasses for hunting I thought I would write and get your advice. I want, preferably, an 8X if I can get a good one that does not run over 23 or 24 ounces in weight.—H. S. B.

Answer (by Colonel Whelen). In selecting binoculars for hunting and general outdoor work, there are certain general principles to be borne in mind. Under almost all conditions, an exit pupil of 3-mm. will admit all the light that the eye can avail itself of. Once in a great while, a glass having a 5-mm. exit pupil may be superior, but so seldom that it does not pay for the high price and heavy weight of such glasses. To obtain the exit pupil of any glass, divide the power into the diameter of the object lens expressed in millimeters—i. e., 24-mm. ÷ 8 = 3-mm. exit pupil.

A field of view of 100 yards at 1,000 yards is large enough for all practical purposes, although at a horse race or football game, where there is very rapid movement at close range, a very wide field of view is desirable.

Resolving power—that is, ability to make out small details at long range—depends upon magnifying power, but still more on the size of the object lens. But here, again, we must consider bulk, weight, and price. In 8-mm. the very small increase that one will obtain in resolving power from a 40-mm. objective over a 24-mm. objective does not pay, in view of the increased weight, bulk, and price of the 40-mm. glass.

Most field-glass circulars state that 6-power is the best all-around magnifying power, because it is difficult to hold a higher power steady. This does not apply to riflemen, who are used to holding things steadily, and, anyhow, every experienced

user of field glasses knows that he can not observe well standing up—at least, the elbows must be rested. A rifleman can observe well even with a 16-power glass. But the point is that if we go above 8-power those features necessary to get a large exit pupil, good resolving power, and large field of view make the glasses so heavy, bulky, and costly that they are out of the question for practical work in the hunting field. A wealthy sportsman might with great advantage have his guide carry a 10-power Zeiss Dekar glass weighing 41½ ounces and costing \$134 for sheep hunting, but, personally, I don't want to lug such a glass over sheep mountains, nor can I afford it. Therefore, for the hunter, the 8-power is the best compromise, and the less weight and bulk, the better, provided we do not sacrifice important optical qualities.

The best binoculars in the world are made by Zeiss and Hensoldt. The workmanship, durability, and optical qualities of glasses of these makes are well worth the slightly increased price. There are three or four other makes that are almost as good, but space does not permit mentioning them. Having had a lot of experience in rough countries, I naturally prefer the Hensoldt, because they can be entirely dismounted by anyone with simple instructions, and the prisms and lenses cleaned and polished. This would be a decided advantage if one fell in fording a river, or had a canoe upset. With any other make of glasses, they would have to go to an instrument-maker to be cleaned before they would be of any further use.

Now, we will proceed to discuss the individual glasses.

The Mirakel 7-power binoculars are deficient in both light-gathering qualities and definition to the other glasses discussed below. The one advantage of these glasses is that they are so small and light that one can and will put them in his shirt pocket when he gets up in the morning and not take them out until he goes to bed at night. All other glasses will likely be carried only when hunting. With my poor eyes, I always have a pair of these glasses in my shirt pocket, and I find it a decided advantage to always have a fair pair of binoculars handy where I can use them almost instantly to help out my eyes. They are not good hunting glasses. I always carry a better pair when hunting, but even then, the little Mirakel 7-power glasses are so light that I don't bother to take them out of my shirt pocket.

For the man who must economize, the new 8-power Mirakel Daylux glasses are excellent. The average man can hardly tell that they are any less efficient than the more expensive instruments, they are very small and light, and they only cost \$30. But for the man who can afford it, it is always best to get the glasses made by Zeiss and Hensoldt.

So far as optical qualities are concerned, you can not get better 8-power glasses than the Zeiss glasses. But their weight and bulk, together with the fact that they can not be dismounted for cleaning by the hunter, cause me to recommend a certain Hensoldt glass to you.

The best all-around hunting and outdoor binocular I have seen and used extensively is the Hensoldt Travel Dialyt binocular, 8-power, 3¼-mm. exit pupil, 108-yard field of view at 1,000 yards, 26-mm. objective, weight 12 1/3 ounces, and size small enough to easily slip in a medium-size coat or large-size shirt pocket. It is a splendid hunter's or sportsman's glass. I think it costs between \$64 and \$68. The agents are Swift & Anderson, 93 Federal St., Boston, Mass.

A TWENTY-GAUGE MOSTLY FOR SKEET

I HAVE read with a great deal of interest your writings about the new 20-gauge Remington automatic.

I hope to own one of these guns some time, but I can not decide the length and bore of barrel. Most of my shooting is done at Skeet, with four or five afternoons each fall at pheasants and partridges.

I would greatly appreciate any advice that you may give me as to the length and bore for that type of shooting. Also, would you prefer a matted rib on the barrel?—A. C. A.

Answer (by Captain Askins). The right barrel for Skeet, I suppose, would be a cylinder 26-inch. I have been trying out a cylinder barrel Winchester 20 on clay birds, mostly Skeet shooting, and it seems no trouble for the gun to reach them. It is surprising the distance a good-shooting cylinder 20 will break clay birds with an ounce of shot. Just in trying out the gun I broke ten birds straight at the usual 16-yard rise, birds thrown full distances; and I then concluded that any time I missed a Skeet bird it would be my own fault.

That cylinder barrel would probably do very well on the grouse, too, but I do not know about the pheasants. It is my experience that you get all kinds of shots on pheasants—some of them farther than any gun will reach. If this is so in your pheasant-shooting, you need a full-choked 28-inch barrel for the pheasants. A modified barrel might do. It looks to me like two barrels, and that is what I ordered for my own use. You might use but one barrel and shoot spreader loads on some of the Skeet birds. It is a nice thing, if a man can afford it, to have two barrels on almost any pump or repeating shotgun. Some description of shooting is always bobbing up when the cylinder barrel is needed, or it might just as well be a choked barrel at another time. However, if you are looking mostly for a Skeet barrel, then the 26-inch cylinder is right.

A MAN-SIZED .22 HUNTING RIFLE

I AM 42 years old, weigh 160 pounds, have good eyesight, and am in the market for a new .22-caliber rifle; something

in a repeater, extremely accurate, well-stocked and sighted, bolt-action preferred, and easily handled in a car. I will use it mostly for target practice, but will want to shoot gophers and other small game.

I suppose the new Winchester 52 with semi-beaver-tail fore end and new dimension stock with speed lock is the last word in factory target .22's, but think this would be too awkward to carry in a car. I have heard no comment on the new stock. Is it all that a person would want? I am particular about a good job of stocking, as it is not so difficult to obtain an accurate barrel.

I believe the barrel is a little too long for my purpose, and would want a Lyman receiver rear and 17A front sight on it. Would this be your choice of sights for my purpose? The Springfield M1 would come better sighted, probably, for me, but would not have the speed lock and would have the other objectionable features of the Winchester 52.

I have in mind the Winchester 57, but believe this is more of a boy's rifle; but if it had a man's stock and the speed lock I think it would be about what I would want. Can it be furnished with a speed lock and stock similar to the 52 at the factory, or would it be necessary to have the stock made elsewhere? If so, where would you recommend having it done? Have you any other rifles or combinations in mind that would serve me better?—W. K. A.

Answer (by Colonel Whelen). It is a lamentable fact that we have not a single decent .22-caliber hunting rifle on the market. All of the rifles of this caliber are either boy-sized, or else are the very big and heavy small-bore rifles. The Winchester Model 57 is decidedly boy-sized and boy-weight. It is the very best boy's rifle I have ever seen, but unless you have already seen it and do not object to its small size, I think I would advise against your getting it. It can not be furnished with the speed lock.

It could be fitted with a new stock by a gunmaker; but first of all, if you are dead set on getting it, I would see if I could not modify the old stock. At the very least,

(Continued on page 48)

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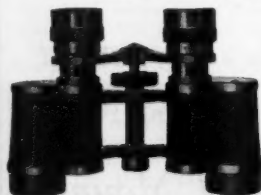


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A MAN-SIZED .22 HUNTING RIFLE

(Continued from page 47)

your modification of the old stock would be a good guide to the gunsmith in making a new stock.

The Winchester 52, I think, offers the best promise for development into a good hunting rifle. As it is, it is too heavy, and the factory rear sight on it can not be used for hunting at all, although it is a good target sight. The old stock was not so bad. The new stock is a very great

improvement, however, and the speed lock is also a decided improvement. You could take one of these rifles, cut the barrel off about 6 inches in length, fit a new front sight and a Lyman No. 48 rear sight, and thin the stock down a little bit and thus probably reduce the weight of the rifle about a pound and a half. A great many men have done this in order to get a good hunting .22-caliber rifle. Some of them have even spent as much as \$250 on the modification.

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BELL'S "BETTER GUNSTOCK BLANKS." Shorts, \$2; Longs, \$3; in best plain, dense Pennsylvania walnut more than five years' seasoned "BONE DRY." Will trade blanks on modern and old-time arms. BELL, "The Gunman," Lewistown, Pa. 11-30

I WISH to thank the public attending Camp Perry for their liberal buying and favorable comment on my goods exhibited. The celebrated 5-lever triggers and speed action for Springfield and nearly all other rifles. Why handicap a good rifle with a hard trigger pull, a slow action and short sight radius? World's Champions do not do it when they shoot against one another. This ought to convince you. E. A. Hilbert, Knightstown, Ind. 11-30

INDOOR spotting telescopes, will spot .22 holes in black, \$10; .22 bullet-hole gauges, 25 cents; cartridge blocks, 25 cents; sheepskin pads per set of three, \$1.50; New Kerr Target Slings, 75 cents; telescope eye cups, 50 cents; cleaning patches per 100, 15 cents; full-length leather re-enforced canvas carrying cases for Winchester 52, etc., \$2.50; full-length leather cases, \$10.50. Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

COLLECTORS TAKE NOTICE—I have been authorized to offer for sale a collection of antique firearms. More than 1,000 pieces. It is a general collection and contains many choice pieces; no junk. Located in Ontario, can be sold in its entirety or in two parts. J. G. W. Dillin, Media, Pa. 11-30

ONE MANNLICHER-SCHOENAUER, 6½-mm. 22-inch barrel, short forearm, set trigger, Lyman gold bead front, Lyman cocking piece rear sight, with Noske 2½X telescope sight, adjustable for elevation and windage, Noske mount, perfect condition, \$85. W. H. Gohdes, 1811 I St. N.W., Washington, D. C. 11-30

ONE SAVAGE .25-20 Sporter, new, with Lyman sights and scope blocks, sling swivels; one Winchester A5 scope, nearly new, with extra 5-power lens, 4 reticules, and leather case; one Winchester 97, 12-gauge, full choke, trap grade, Hawkins pad, bluing worn, otherwise perfect. Terms—\$25 each, no trades; will ship C. O. D. subject to examination on receipt of \$2 deposit each. Rulison Riegel, 519 2nd Ave., Eau Claire, Wis. 11-30

MANNLICHER-SCHOENAUER 6.5-mm. full-stock magazine sporting rifles. The finest rifles made for deer. These are genuine Styr make and are new and perfect. We have ten only, brought in under lower tariff. While they last, only \$59.50. Will ship C. O. D., examination, receipt \$5 money order. Regular price \$75. Baker & Kimball, 37 South Street, Boston, Mass. 11-30

ONE COLT OFFICERS' MODEL target revolver, 6-inch barrel, caliber .38, perfect, \$22.50. W. H. Gohdes, 1811 I St. N.W., Washington, D. C. 11-30

REMINGTON Model 30 Express .35-caliber, new, fine leather case, \$35. WANT—Winchester Model 54, new. William Keys, Medford, Wis. 11-30

WINCHESTER 52 with specially selected barrel, perfect condition, scope blocks on barrel, \$25. Edwin Neff, South Orange Grove, Pasadena, Calif. 11-30

THE ONLY House of its kind that in 54 years has NEVER handled inferior make or condition. "The Best for less with nothing less than RIGHT at ANY price." Stamps bring you "Dicks" describing TARGET Colts in single-action by master-craftsmen who SENSE COLTS. SHIFT WITH HOUSE O' SHIFF, N. Woodstock, N. H. 11-30

.22 EXPRESS Winchester S. S. good condition, new barrel, never fired, loading tools, cartridges, first money order for \$25 takes it. No trades. Floyd Butler, Poultny, Vt. 11-30

FECKER 18-inch scope, 10X Winchester mounts, \$30; new Savage .32 automatic, \$14; new S. & W. .38 hammerless, \$23; new Smith Olympic, \$75; fine Winchester, ventilated trap, \$65; new Winchester 54, .30-30, \$34; fancy-grade Winchester 95, .35 caliber, \$40; new Owen 12-28, \$125; new fancy-grade Remington auto., ventilated 12-28 modified, \$70; new Colt .45 S. A., \$24; new fancy-grade Savage .250-3,000, \$50; new Winchester .401 auto., \$42; new .25-20, \$25; new Pope .22 long rifle, \$75; like new Parker C. H. E., 12-30, \$150; fine Savage .30-30, G model, \$29, and one .250-3,000, same price. Fred N. Anderson, 251 Main St., Hackensack, N. J. 11-30

CHECKERING TOOLS—Very practical set, includes fine, medium, coarse spacer, border, V-cutters, Swiss file and flexible straightedge, in nice khaki case, \$3.50; extra fine set for fancy work, \$5. J. R. Whitman, 1122 Buckeye Ave., Wellsville, Ohio. 11-30

INTERNATIONAL BUTT PLATES for Winchester 52, Springfield, etc., finished and polished, \$2.25; adjustable model, \$5; International adjustable palm rests for Winchester 52 and Springfield, \$8.50. Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

STEVENS offhand .22 pistol, 8-inch, good, \$8; Remington 12C .22 rifle, peep sights, perfect, \$21. Maurice Kimick, Scottsburg, Ind. 11-30

WINCHESTER CARBINE .30-30 with Lyman 4A ivory 26, 6, inside perfect, outside very good, \$25. N. P. White, R. F. D. No. 5, Cuba, N. Y. 11-30

REMINGTON .22 caliber 12-c. target grade, Marble's sights, excellent, \$16; Swiss rifles, \$4.50. WANT—Winchester 52, also one cylinder for 1917 Colt. Hugh Gray, Elm Grove, W. Va. 11-30

SPENCER slide-action repeating shotgun, Model 96, perfect working condition, rare, treasure for collectors, must sell, bargain, make reasonable bid. Paul Wander, 341 East 30th, New York, N. Y. 11-30

RELOADING TOOLS—Ideal No. 3 tools .30-30 and .25-25, each \$2.50; Ideal No. 4 tool and mould combined .32-20, \$2.50; Bond Model B tools, .38 special and .45 Colt combined, \$4.50; B. & M. 30-caliber 154-grain nickel mould, \$3.50; .38 auto. hollow-point mould, \$3; .38 Special Bond double-cavity mould, \$2.50; Ideal mould, .45 Colt, \$2.50; Modern-Bond powder measure, \$4.50. Pistols—.38 Colt pocket automatic, 3 clips, holster, fine shape, \$21.50; .22-32 S. & W. target revolver, new, \$21.50; .32 S. & W. safety hammerless, 2-inch barrel, \$15. Dr. A. J. Kent, P. O. Box 1531, Yuma, Ariz. 11-30

SACRIFICE—WINCHESTER 52, new model, used only two seasons, gun-crank condition, Lyman 17A front, new case, \$25. Jos. W. Brauneis, Greenwood, Wis. 11-30

H. & R. SINGLE 410-GAUGE, \$8; 22 H. P. 99 Savage, \$20; .32 S. & W. revolver, \$7; .38 Colt revolver, \$20; 22 Model 39 Marlin, \$15; 25 Colt auto., \$10; 25 Le Dragon auto., \$7. These arms in good condition, extras included. Starr .44-caliber percussion revolver, \$5; H. Behr .50-caliber percussion pistol, \$5; D. B. Derringer percussion .30-caliber, \$5; 22 Colt 1874 revolver, \$5; 32 Marlin 1875 revolver, \$5; 12-gauge D. B. Remington shotgun, \$12; 36-40 1873 Winchester, \$5. For complete details any item enclose stamped envelope. John C. Molland, 501 East 234th St., New York, N. Y. 11-30

IMPORTED Circassian Stock Blanks, Sporter length, \$2.75, \$3.50, \$5, \$10; Mannlicher length, \$4.50, \$7.50; shotgun length, \$2.50, \$3, \$4.25, \$7.50; kettle boiled, lined or red, \$1; oil soluble red, 50 cents; Krag collars to slip on barrel at receiver, \$1; Rough Bakelite fore-end tips, \$1.50; horn butt plates, \$1; horn pistol-grip caps, 75 cents; hard-rubber butt plates, 75 cents; checked-steel engraved butt plate with trap, \$5; engraved-steel pistol-grip caps, \$2.50. Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

.44 S. & W. RUSSIAN break-open, 8-inch barrel, absolutely accurate, works in A1 condition, nickel finish, \$30; 9-shot H. & R., fine, \$9; Lyman 48, \$9; Lyman 17A Springfield, \$3. WANT—52 Winchester, telescope sight and mounts; powder scales No. 80, or No. 354; 22 pump, perfect; 22 Woodman; N. M. 30-06 shells. Make offer or state price. Joseph E. Lynde, Box 488, Gillette, Wyo. 11-30

IDEAL lubricator, \$5; B. & M. visible powder measure, \$4.50; B. & M. straight-line tool, complete .30-06, \$6; .38 Special O. M. target, perfect, \$30; 5A Winchester scope, \$25. Lawrence H. Lapinske, 726 Werle Ave., Wausau, Wis. 11-30

STEVENS telescope with mounts, 4 diameter, 30 inches, excellent condition, price \$7.50. Norman Read, Belfast, Me. 11-30

START a cartridge collection. 100 different cartridges dating from the Civil War and up through the World War, \$3.50. List of cartridges for collectors, 10 cents. W. S. Lutz, Chestertown, Md. 11-30

.44 S. & W. SPECIAL NEW SERVICE Colt target model slightly used, perfect condition; B. & M. jointed cleaner, B. & M. 36, model, ideal loading tool, all attachments. Ideal powder measure. Ideal sizer and lubricator, loading blocks, B. & M. loading tool for .44 and .30-06 with bullet-seating dies, 900 rounds hand-loaded ammunition, 300 bullets—all at \$75. A. H. Sikes, 119 Kohler St., Sault Ste. Marie, Ont. 11-30

5A WINCHESTER scope, new, Ballard rifle .32 rim or center fire, Frank Wesson rifle, heavy tip-up .32 rim, both good, Stevens double set trigger fits .44½ model. Ernest House, Hanover, Conn. 11-30

PREWAR #900 Sauer 12, like new, \$350; new V. H. E. Parker, pad 12, \$59; three-barrel 16-8 millimeter, two sets barrels, \$100. Frank Hornig, 11 Rolling St., Lynbrook, N. Y. 11-30

AS ISSUED Russian in good condition with ninety Remington cartridges, \$7.50. WANT—30-06 and Krag ammunition. Edward Adams, Box 289, Birmingham, Ala. 11-30

SAVAGE SPORTER, 22-caliber, like new inside and out, bluing not worn, Lyman 45G rear, 93 front Parker rod, good case, extra magazine, \$20. John Haynes, 66 Gautier Ave., Jersey City, N. J. 11-30

ONE IVER JOHNSON Super trap, double ejector, brand new, \$40. C. C. Snaveley, Sta. C. R. F. D. No. 6, Milwaukee, Wis. 11-30

MILLER checking tool with three bits cutting fine, medium, and coarse checks, \$3.50; De-Luxe ramp front sight, ivory bead caterpillar sight with detachable hood, fits Springfield, Krag, Russian, etc., best ramp sight on the market, \$5.50. Case-hardening powders, \$1. Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

FORCED SALE—Bisleys in factory condition, with checked straps and triggers, \$35 each; fine .45 Army auto. pistol, \$15. Many more. D. B. Conley, Swampton, Ky. 11-30

KRAG CARBINE, Pacific rear, refinished checked stock, bore perfect, \$9; Savage .32-20, Lyman 42, excellent condition, \$20; Colt New Service .45, 7½-inch, new, \$24; S. & W. 1917 .45, perfect, \$15. No traces. C. Gene D'Oench, 709 University Club Bldg., St. Louis, Mo. 11-30

.30-30 WINCHESTER RIFLE, takedown model, special make, peep sights, new barrel, never been shot, good as new, bargain, \$47.50. Leslie Chism, Olive Branch, Ill. 11-30

ITHACA 16-gauge double, \$25; Marlin 30-gauge pump, new, \$35; Winchester 30, new, \$24; Winchester 52, \$30; Colt .38 target, \$27.50; Colt .22 target, \$22.50; Winchester 32 x 40 set trigger, \$17.50; muzzle-loader set triggers, about .36 caliber, good, \$10. Expert gun repairs, bolt actions remodeled to sportsmen, new guns at a discount. Will buy, sell or trade. John A. Hach & Son, Shippenville, Pa. 11-30

BUFFALO-NEWTON, caliber .35, set trigger, excellent condition. A. Bourget, Box 127, Daggett, Calif. 11-30

COLT S. A. .32-20, 7½, barrel perfect, outside excellent, plain laced holster, \$23. First money order. Frederick Rockwell, 67 Church, New Brunswick, N. J. 11-30

WINCHESTER 52, speed lock and outfit, factory condition, \$50. H. Shields, 67 S. Mulberry, Chillicothe, Ohio. 11-30

MAUSER RIFLE, 6.5 caliber, Circassian-walnut stock, cost \$135, like new, \$62.50; Winchester Model 53, .32-20, same condition, \$16.50; Colt .45 automatic pistol, new barrel, rebled, \$18; Smith & Wesson, .44 Special, 6½ barrel, fine condition, \$20; Frank Wesson .22-caliber, 10-inch swing-to-right barrel, attachable skeleton stock, stamped Frank Wesson, patented 1870, exactly like new, \$25; Paterson Colt, .34-caliber, folding trigger, engraved, seems to be brand new, fancy case, \$250; Winchester 1912 model, ribbed 28-inch full-choke barrel, brand new in original factory box, \$42.50; L. C. Smith trap-grade double, ventilated rib, 32-inch full-choke barrels, perfect, cost \$176.50, sell for \$90; Smith specialty grade, 20-gauge, ventilated rib, 28-inch barrels, perfect, cost \$200, sell \$100; Winchester 1912 model pigeon grade, ventilated rib, 30-inch barrel, full-choke, extension fore end, fine condition, cost \$250, sell for \$125; Merkel Brothers, over-and-under, paragon grade, 30-inch barrels, full and modified, like new, cost \$1,150, sell for \$550. James M. Douglas, 4433 N. Robey, Chicago, Ill. 11-30

S. & W. 1917 .45, bluing-fine, bore somewhat rough but good, .295 Western 1930 match ammunition for same, together \$25; 8-mm. Waffenfabrik Mauser saddle-gun, Lyman 35 rear leather saddle gun case adapter ramrod, good condition, \$45. Henry Jennings, Wewoka, Okla. 11-30

COLT .45 automatic, \$12; Colt .32-20 single-action Army, 4¾-inch barrel, \$13.50; Colt D. A. .38, 4½-inch barrel, \$8; Philadelphia percussion Derringer, \$10; 1903 Springfield, \$15. SELL OR TRADE—Model 90 Winchester as new, Lyman 2A rear; 1908 Waffenfabrik-Mauser Springfield, new; Krag Sporter, good; Smith & Wesson .22-32, slightly pitted; Colt percussion revolving carbine, fitted with under. Oran Delaney, Greenville, Tex. 11-30

SPRINGFIELD Service Rifle, barrel perfect, outside fine, \$15; 3 old rifles, cap lock, \$2.50 each; S. & W. 32 hammerless, working order, \$5; S. & W. single-action sheath trigger .32 C. F., perfect shape except two small flecks on finish, \$12.50. Alexander Davis, 5725 Blackstone Ave., Chicago, Ill. 11-30

GUN SALE—Winchester .32 Special repeater, cartridges, \$15; Marlin .32-40 repeater, cartridges, \$15; Winchester .38-56 repeater, cartridges, \$15; Winchester .25-35 repeater, cartridges, \$15; Winchester and Marlin .25-20 repeaters, choice each with cartridges, \$15; Winchester and Marlin .38-40 repeaters, each with cartridges, \$15; Springfield .30-40 and Mauser 8-mm. rifles, each with cartridges, \$15; Winchester 12-gauge repeater, \$15; National 12-gauge repeater, \$15; Stevens double 12-gauge hammerless, \$15. Send money orders. N. P. Frayseth, Milan, Minn. 11-30

FULL-LENGTH shell-rezizing dies for .38 Special, .45 Colt, .38 automatic, and .45 automatic, \$1 each, postpaid. McCaslin, Centralia, Kans. 11-30

SEVERAL high-grade 8-gauge and 10-gauge double and single long-range shotguns, hand-loaded shells, trap guns, Colt and Smith & Wesson revolvers. Send 10 cents for lists. N. P. Frayseth, Milan, Minn. 11-30

WINCHESTER Winder action .22 single shot, musket type, Lyman globe front, windgauge micrometer rear, fine condition, \$22 P. O. order, postpaid; new long Krag, cut down forearm, \$15 P. O. order, postpaid; new 22 Woodman, holster, extra clip \$24. P. O. order. Carroll Soo-Hoo, 2116 Channing Way, Berkeley, Calif. 11-30

COLT OFFICIAL POLICE .22 caliber, fired 100 times, original wrapping with test target, \$21; Remington 12C, Lyman peep rear, good, \$12. Trades. Dr. Sperber, 2082 W. 65th St., Cleveland, Ohio. 11-30

COLT Camp Perry, special target-shooter's grips, selected gun, perfect, holster, \$30; Colt Pocket Positive, good used condition, holster, \$15. J. F. Galloway, Rm. 1614, Marine Trust Bldg., Buffalo, N. Y. 11-30

SMITH & WESSON .22-32 target revolver, fine, new condition, \$25. R. L. Cushman, 155 High Reading, Mass. 11-30

BROWNING automatic shotgun, 12-gauge, interchangeable, 30-inch barrels, one full-choke matted rib, one modified choke, beautifully engraved and checked, sole-leather case, brand new, list \$142, for sale cash \$98. Frank T. Parsons, Jr., 909 East Capitol St., Washington, D. C. 11-30

BRAND-NEW REMINGTON Repeater, Model 14A, .30-caliber, \$31.50; Ithaca double No. 3, grade 12-gauge, 30-inch, M. & F. rubber pad, leather gun case, in new condition, cost \$90, bargain \$56. Hudson, 52 Warren St., New York, N. Y. 11-30

PAIR Richards flintlock dueling pistols in perfect condition, in case with accessories, \$100; flintlock blunderbuss, 4-inch muzzle, metal inlays in stock, heavily engraved barrel, sound except lock needs repairs, \$40; flintlock blunderbuss, 2-inch muzzle, full length 17 inches, good condition, barrel inlaid with silver, \$40; Henry rifle, \$25; Lefauchaux double gun, 12-gauge and .44-40, \$5; .36-caliber Manhattan, \$8; percussion pistol with bayonet attached, \$8; .32 S. & W. No. 1 model, \$5; .32 S. & W. No. 2 model, \$5; .38 S. & W. similar to Russian, \$5; .44 S. & W. American, \$10; .32-caliber Manhattan, \$5; .32-caliber 4-barrel Sharps, \$6; .32-caliber Allen & Thurber single-shot percussion pistol, \$5; single-barrel ringed trigger percussion, \$4; double-barrel percussion, inside hammers, \$4; Allen & Thurber 6-barrel pepperbox, \$8; Allen & Wheelock 5-barrel pepperbox, \$8; Allen & Wheelock 4-barrel pepperbox, \$4; .32-caliber 4-barrel Sharps, \$5; .36-caliber Cooper, \$3; pair .44 Colt percussion, \$10; Savage percussion, \$6; .44-caliber Lefauchaux, \$3; copy of Lincoln Derringer, fine, \$10; copy by Clark, Memphis, \$12; Winchester 52, extra heavy barrel, factory grease, \$45; Luger hunting carbine 12-inch barrel, grip safety, shoulder stock, factory grease, \$50; .22 S. & W. perfected target, perfect, \$22; .35 S. & W. automatic, fine, \$20; real Kentucky flintlock, 4½-inch barrel, elaborate, engraved patch box, full length, beautifully finished, stock of rich curly maple, doekin pouch with hair on, fine horn, \$50; U. S. Springfield flintlock 1813, serviceable condition, \$20; heavy percussion match rifle by Ziell, 42-inch barrel, set triggers, \$10; fine Kentucky 42-inch barrel, elaborate patch box, full-length curly-maple stock, ornately carved, powder horn, \$30; Kentucky, .28 caliber, 45-inch barrel, set triggers, full stock, horn, \$15; Kentucky, 45-inch barrel, set triggers, full-length light-maple stock, \$25; Kentucky, 4½-inch barrel, full stock of light maple, fine, \$20; Kentucky, 36-inch barrel, full stock, patch box, single set trigger, horn, \$15; 22-gauge double percussion, 32-inch barrels, finest one I ever handled, \$12; Persian Miquelet-lock pistol, \$10; Scotch flintlock pistol, barrel, lock and trimmings are brass, beautiful gun, \$40; North, 3-inch cannon barrel, superposed hammer, flintlock pistol, fine specimen, \$25; English military flintlock pistol, reputed to be a relic of Yorktown, \$20; flintlock pistol with card showing it to be a relic of French Revolution, \$25; small flintlock pistol, full muzzle, griffin head butt, \$15; very small flintlock pistol, marked Dumaresq, 6-inch full-length, \$25; large flintlock military pistol, marked 1719, \$15; flintlock pistol marked Sharpe, \$10; Ketland flintlock pistol, \$10; heavy cavalry flintlock pistol, \$10; very ancient, cannon barrel, superposed hammer, briar root handle, flintlock pistol, \$25; flintlock pistol, barrel, lock and stock engraved, deeply carved trigger guard and butt cap, \$12; fine percussion dueling pistol, barrel stamped Veni-Vedi-Vici (believe it or not), \$15; elaborate percussion pistol, hammer is figure of lion, cannon muzzle, inlaid in gold on the barrel "De Heraduraz Por Sebastian Alberdi En Eibar 1843," \$15; German military percussion pistol, \$5; Lewis & James English percussion dueling pistol, \$7; 1886 model Winchester, 45-70, \$20; .45-90, \$18; 40-82, \$20; all fine. Will trade for perfect N. R. A. Sporter as issued, perfect, 22 M1 as issued, Fcker, Malcolm, Stevens or Winchester, hunting scope and mount, complete years the RIFLEMAN. Billy Anderson, 5 E. Third St., Newport, Ky. 11-30

.38-55 WINCHESTER RIFLE, average condition, \$12.50; .45-70 Springfield carbine rifle, good condition, \$6.50; .45 Colt single-action revolver, good, \$5. Leslie Chism, Olive Branch, Ill. 11-30

10-GAUGE HAMMER, 34-inch, double, fair condition, \$12; Pacific reloading tool, complete for Krag, Russian, Springfield, \$9; scope mounted .22 Savage high-power, excellent condition, \$35; Colt .38-40 repeater, rough, accurate, no rear sight, \$5. C. O. D. or prepaid cost with order. Grant Waldron, Slatsburg, N. Y. 11-30

NIMROD GUN BLUE acts by chemical action alone without the use of heat or tanks, \$1; Pat. O. Pat. repairs shotgun pits, 50 cents; Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

MY TRADE JOURNAL listing and illustrating 116 Colt arms will be mailed to you for \$1 per copy. The best Colt reference known. Hundreds of other antique arms for sale. F. Theodore Dexter, 910 Jefferson, Topeka, Kans. 12-30

LEFEVER single-trap gun, 12 gauge, new, Hawkins recoil pad, shot 12 times, can't follow sport, \$23 cash. L. M. Gable, 552 Main St., Bethlehem, Pa. 11-30

BSA .22 FANCY RESTOCK JOB, perfect condition, blue worn some, \$30; Winchester 4B telescope, fine cross-hair reticle, \$15. Will ship C. O. D. subject inspection, \$5; deposit required. Would consider Colt Officers' Model 22 or Camp Perry in perfect condition in exchange. Cecil Berger, Drumright, Okla. 11-30

FREE-RIFLE Hoffman barrel, German set trigger, Lyman 48 rear sight, Springfield action, blocks for Fecker scope, barrel will group better than 1 1/2 inches at 200 yards, price \$65. Write Stanley W. Dinwiddie, Box 479, Charlottesville, Va. 11-30

AIRPLANE ENGINE, new, never uncrated, 9-cylinder air-cooled, 165 H. P., \$50. Consider rifle in trade. Harry Longden, Bay State, Northampton, Mass. 11-30

THREE WINCHESTER S. S. Heavy rifles, fine; one Ballard .32-20, fair; one Colt revolving rifle, good; one Evans rifle, very good; one Evans carbine, very good; one Winchester Henry, very good. Prices and description on application. Charles H. Lawrence, Box 126, Centralia, Wash. 11-30

.22 COLT WOODSMAN, fine condition, bore and action perfect, fired less than 300 rounds, good leather holster, price \$25. P. Reed, R. P. D. No. 2, Barrington, Ill. 11-30

CASH OR TRADE for used firearms and equipment. Give condition and price in first letter. Practically new Goertz 3X hunting scope with fine sole-leather carrying case, mounts but no bases, \$22.50; Savage .22 Sporter in perfect condition, late model, \$13.50; A. S. & W. special barrel and cylinder in perfect condition, for Colt "New Service," \$5. Chester Nikodym, 5703 Broadway, Cleveland, Ohio. 11-30

SALESMAN'S SAMPLES—Hensoldt, Bausch & Lomb, Swift & Anderson, binoculars and scopes. Stamps for literature. Vernon Optical Co., Box 14, Mt. Vernon, N. Y. 11-30

WOTKINS .22 EXPRESS—Springfield barrel in Winchester S. S. high side action, bushed-down firing-pin hole and reduced point firing pin, Lyman tang rear sight, issue Springfield front, straight-line loader, shell-neck reducer, primer punch and seater, good looking well done job, just finished, \$30; Smith D. B. hammerless automatic ejector, 8-pound, 30-inch full-choke, slight immaterial dent in left barrel, this gun is the old-time prewar "Crown" grade, its present-day closest approximation is the "Eagle," grade at \$165.25; just restocked by Elliott Bros. with what they report is the handsomest piece of walnut they have ever worked, a beautiful job, \$60 f. o. b. Seattle. W. B. Knoble, c/o J. B. Currie, 1209 First Ave., Seattle, Wash. 11-30

TWO SETS B. & M. No. 26 tools, one .30-06 with bullet puller, \$9.50; one .45 A. C. P., \$7.50, both good condition. R. W. Hawthorne, 459 Spring, Elgin, Ill. 11-30

.45 N. S. GOOD CONDITION, \$15; 38-30 Marlin, 26-inch, full magazine, case, fine shape, \$18. Robert I. Butta, 414 Harrison St., Lynchburg, Va. 11-30

CASHMORE'S highest quality, handmade 12-gauge ejector, Whitworth barrels, with side lugs, finished beautifully, as new. J. S. Ovington, Marion, Iowa. 11-30

WRITE for special prices on hunting scopes and binoculars. Any binocular repaired. Estimate upon inspection. Vernon Optical Co., Box 14, Mt. Vernon, N. Y. 11-30

WINCHESTER 52, in perfect condition, four small scratches on forestock, otherwise like new, first check for \$30 takes it. Harold Sjostrom, Winthrop, Minn. 11-30

SAVAGE SPORTER 23C, practically perfect, Lyman sights 3 and 42, \$18; Holton corneal, \$18; Stevens .414, practically perfect, Lyman 31 and 103 sights, \$20. TRADE—Guitar, cost \$30; mandolin, cost \$30. WANT—Graflex or other good Kodak, or what have you? W. K. Carson, Bristol, Tenn. 11-30

.44% HEAVY STEVENS, set triggers, Schuetzen butt, .22 caliber, 10 pounds, fine, \$19. Fancy Stevens 44% set triggers, Schuetzen butt, pistol grip, new Ballard .22 barrel, extra fine, 14 pounds, \$30; .22 Winchester, 11 pounds, Hubalek, relined, brand-new condition, \$26; new B. & M. tube sight, micrometer mounts, \$12; .22-32 S. & W., new condition, \$23; .22 Marlin, lever action, fair, \$7. Lowry Smith, R. F. D. No. 1, Rochester, Pa. 11-30

HEAVY-BARREL SPRINGFIELD rifle, 24-inch barrel, Serial No. 1248885, Lyman sights scope blocks for Fecker scope, excellent condition, \$45; Rock Island service rifle, star-gauged barrel, fired less than 200 times, perfect condition, \$20. Cash only. G. J. Mundy, 2129 Fulton St., Toledo, Ohio. 11-30

SLIGHTLY SHOPWORN Nighthawk prism binoculars 7 x 24, 10-ounce, 1-year guarantee, only \$29.75 cash, money order, or certified check. Other binoculars and rifle scopes, \$5 to \$110. Stamps for literature or specify glass wanted. Vernon Optical Co., Box 14, Mt. Vernon, N. Y. 11-30

M. & P. 38 SPECIAL, B. & M. loading tools, bullet-sizer, Ideal measure, mould, for \$37. Everything very fine. R. Standiff, 1224 Sackett Ave., Cuyahoga Falls, Ohio. 11-30

BRAND-NEW 52 Winchester, speed lock, \$36. WANTED—30-06, Krag, .303 and 7.62 cartridges. D. O. Amstutz, Ransom, Kans. 11-30

ZEISS TELONAR 12 x 40 binocular, almost new, \$60; Luger .30 D. W. M. 3 1/2-inch barrel, almost new, \$18; Krag 22-inch, new inside, 20 Kleanbores, \$5. Send P. O. orders. WANT—Shot-out N. R. A. or National Match Springfield. W. B. Covington, Glenns Ferry, Idaho. 11-30

MAUSER .30-caliber officers' pistol, wood holster stock, new, never fired, make offer; German Mauser .98, Army rifle, good condition, \$15, or trade Colt S. A. 7 1/2. J. Arthur, 717 DeGraw Ave., Newark, N. J. 11-30

BISLEY COLT .45, 4 1/2-inch barrel, new, \$35; .38 and .351 automatic cartridges, \$2 per 100; Winchester, 12, 16-gauge, 28-inch modified, like new, \$35; Winchester rifle, .94 model, octagon barrel, Lyman sights, checked stock, fine, like new, \$30-30; Winchester, butt stock and forearm checked, .94 model, pistol grip, fine, \$10; Savage Sporter rifle, .22 long rifle, Lyman 103 micrometer wind-gauge, No. 5B front, loops and strap, cost \$36, like new, \$25; Winchester rifle, single shot No. 3, two barrels, .38-55, .25-36, Lyman sights, fair, \$15; new Ihaca No. 4, Krupp fluid steel, 12-gauge, 28-inch barrels, automatic ejector, ivory sights, Jostam anti-finch pad, finely engraved and checked, perfect inside and out, gold triggers, \$80; new Ihaca No. 4, Krupp fluid steel, 10-gauge, 32-inch barrels, automatic ejector, ivory sights, Jostam anti-finch pad, finely engraved and checked, perfect inside and out, gold triggers, \$80. Fine super long range duck gun. T. P. Price, 1203 North Main St., Jamestown, N. Y. 11-30

PACIFIC-BALLARD .22 L. R., 28-inch, No. 3 DiOnne barrel, barrel and action like new, \$45; Niedner .25, Roberts barrel, fits Springfield action, shells, bullet-seater, like new, \$23; Winchester S. S. 38-55, nickel-steel barrel, fine condition, \$14; Ideal muzzle-resizers, one each .25-35, .30-40, 75 cents each. No trades. J. R. Buhmiller, Eureka, Mont. 11-30

SELL OR TRADE

.22 COLT WOODSMAN; .38 Colt automatic; .22 Hi-Power; .22-410 over-under; 3-barrel 16 and 30-30; few rifles; King canvas boat; Flato boat; King trumpet with case; tank—auto-gas stove; Gerheart knitting machine. WANT—20-gauge Remington automatic, ribbed barrel, 17 1/2; or what have you? R. C. Scott, Port Richey, Fla. 11-30

SAVAGE 99G .250-3,000 inside perfect, outside bluing slightly worn, with sling, canvas leather case, and cleaning equipment for, \$35; or trade for .38 special Colt Officers' Model target with 7 1/2-inch barrel in like condition. Paul Hansen, Ellsworth, Minn. 11-30

FANCY BALLARD STEVENS .32-40 single-shot target rifle, fitted with scope blocks, no sights, fine engraved action, Schuetzen butt stock with cheek piece, palm rest, fine checked forearm, said to have cost \$165. WANT—Greener or other good grade shotguns, any gauge. N. P. Frayseth, Milan, Minn. 11-30

NEW and used binoculars; spotting, target, and hunting telescopes; Zeiss 18 x 50 Deltormo, \$57.50; Bush 24 x 56 monocular, \$60. Trade-ins allowed. Fred Johnson, Seneca, Ill. 11-30

ONE Western type, 40-pound Heiser saddle and bridle, sheepskin on underside worn but otherwise in perfect condition, cost \$125, sell \$50. WANT—Colt pistols. Can ship f. o. b. Asheville Springfield .30-caliber ammunition \$15 per case, also Krag noncorrosive guiding-metal ammunition \$35 per case. P. O. Box 2, Asheville, N. C. 11-30

COLT .45 automatic, barrel fair, action fine, extra magazines, \$12.50. WANT—22-caliber S. & W. revolver. Harold Barnhart, Box 288, Chillicothe, Ohio. 11-30

PARKER double trap, Greener 10-gauge, Ihaca Field, Colt .45 auto, Colt .45 17 model, .256 Newton, Belding & Mull scope new, Kodak, Bausch & Lomb binoculars, O-Graphic camera, Frank Wilkinson, 82 Monticello, Buffalo, N. Y. 11-30

TAKEDOWN cylinder barrel, for 1897 Winchester, 16-gauge, \$14; Remington automatic, .22 long rifle, \$20; Savage Sporter, .25-20 Lyman 6 and 42 sights, 3 clips, \$22. All as new. WANT—38 Winchester .25-20; 25 Remington, .25-20; 39 Marlin .22. Must be excellent. Dr. C. C. Nickel, Nowata, Okla. 11-30

STAMP COLLECTION—3,400 varieties. Catalogue value around \$400. United States well represented. Trade for best offer in fancy or high-grade bolt-action rifle; caliber immaterial. Von Parkinson, 270 South 12th East, Salt Lake City, Utah. 11-30

.30 LUGER 1911, \$14; .41 Remington Derringer, \$7; .38 Detective Special, holster, \$21; .36 Navy Colt, C. & B. \$14; Mauser rifle, bayonets, \$15; Waltham watch, \$4; violin, \$12. No Chicago gun transactions. Henry Boff, 1128 Drummond Place, Chicago, Ill. 11-30

MARLIN Model .32-22-caliber 24-inch octagon, good, \$12.50; Winchester Model 12 trap grade, 32 inch, full-rib barrel, Hawkins pad, ivory sight, used once, perfect, \$65. WANT—Colt Woodsman, Winchester Model 54, with Lyman 48, .270 caliber; Savage Model 45, .250-3,000 caliber; Savage auto. pistol, .380 caliber. Geo. C. Murphy, 6709 Plymouth, University City, Mo. 11-30

S. & W. .44 AMERICAN, fair condition. WANT—good cap-and-ball and equipment, or .38 Official Police, or .38-44 S. & W.; or what? C. E. Armantrout, 1241 N. 3rd Ave., Tucson, Ariz. 11-30

STAR-GAUGED Springfield, as issued, new. WANT—300 bolt-action Savage, good condition; or what? Alan B. Salkeld, Holidaysburg, Pa. 11-30

FINE Kentucky percussion squirrel rifle, barrel 48 inches long, small bore, fine full-length maple stock, double brass moulds, old leather shot pouch and old powder horn dated 1812, \$65. Have Civil War musket, double M. L. shotgun, other cap lock rifles, two rifle barrels. WANT—Old violins; or what? C. M. Pickel, Jr., Kingston, Tenn. 11-30

TRADE

HAVE a 6 x 24 binocular; perfect. WANT—A complete straight-line reloading tool for the .30-40 Krag. B. Mecklenburg, 20 Madison, Mount Vernon, N. Y. 11-30

BURROUGHS ADDING MACHINE. WANT—Von Hofe Tarpon rod, reel, Zeiss cinchot, target pistol, duck decoys. Box 66, Aransas Pass, Tex. 11-30

FIALA LLAMA BAG, cover, little used, weight 6 pounds, \$20. WANT—38 Special; .22 Target Anco Memo with projector. K. H. Munroe, 21 E. Holly, Pasadena, Calif. 11-30

TRADE POWDER SCALES—Brass balance, fold up in mahogany box, weights included, for .Colt .45 auto., in working order. Floyd Butler, Poultny, Vt. 11-30

S. & W. .44 SPECIAL, fixed sights, 6 1/2-inch barrel, blue, perfect new condition. WANT—Target model .44 or .38, same condition. Henig, 207 S. 18th, Omaha, Neb. 11-30

ELECTRIC MOTORS, Maytag engines, loading tools, cream-separators, water scope. WANT—28-gauge shotgun, Reising pistol, rifle scope, binocular, .30-06 star-gauge Springfield, 1895 Winchester. What have you? N. P. Frayseth, Milan, Minn. 11-30

WANTED

WANT—Used guns, rifles, and revolvers. State make, model, caliber, condition, and lowest cash price. Will sell 13,000 Cimax 16-gauge Smokeless shells 2 1/2-, 1-, 9-, and 10-shot, per 100, \$2; per 1,000, \$17. Write for special prices on any new gun, rifle, or revolvers. M. Morton, 512 Market St., Philadelphia, Pa. 11-30

WANT—Winchester 52 with heavy barrel and speed lock; also 8 or 10X Fecker large objective scope; Winchester or Fecker mounts. Howard Keene, 22 Madison St., West Medford, Mass. 11-30

WANT—Cartridges or empties for .32-44 S. & W. revolver; S. & W. bullet-seaters for same and other sizes; Ideal round-ball moulds. No fancy prices. P. M. Chiswell, Box 302, Winnipeg, Canada. 11-30

WANT—Krag full-length military gunstock. State price. C. A. Fritz, 8336 Michigan Ave., Detroit, Mich. 11-30

WANT—No. 3 Ideal tools for .25-20 single-shot and .22 W. C. F. muzzle-resizers, and full-length resizers for same, wad-cutter and shell chambering reamer for last; couple of hundred .28-30 cartridge cases in good order, price reasonable; die, punches, and gas check for Ideal lubricator, .228-inch; Ideal moulds 25720-96 grain; 228151, 228367, 28522-121 grain, 285346, any .22 or .25 center-fire Stevens rifle, 44% action (which must be in good order), single trigger. Describe fully. Seeley A. Wallen, 815 Hazel Ave., Canon City, Colo. 11-30

WANT—Winchester rifle, single-shot, heavy action, stock good, barrel no account, single set trigger. N. H. Keister, R. F. D. No. 10, Indianapolis, Ind. 11-30

WE ARE endeavoring to create a library for the National Rifle Association. Rare books upon subjects pertaining to the rifle, pistol, revolver, and shotgun are desired. If you have one or more books which you are willing to donate for this purpose, write us, giving name of book and author. 11-30

WANTED—Colt or equivalent American cap-and-ball, muzzle-loading revolvers stamped as made by Samuel Colt Patent Firearms Mfg. Co., Paterson, N. J., or by other American makers. If you have any, write giving full descriptions, markings, condition of finish, and price. Will pay cash or trade for other antique arms, if preferred. McDurdey Silver, 6401 West 65th St., Chicago, Ill. 4-31

WANT—Certain American firearms made before 1876. You may have one or more I require. Please advise. S. H. Croft, "Collector," Cynwyd, Pa. 1-31

GIFTS of rifles, pistols, and revolvers are desired for display at the office of the National Rifle Association. History of the arm should be given, as duplicates are not wanted. The assistance of all shooters is solicited in order to make this collection the most unique in the country.

WANTED—In first-class condition, Ithaca 12-gauge field gun; Savage 23B rifle; Winchester No. 53 .25-20 rifle; 2 1/2 X Zeiss scope. E. B. Callahan, 201 North Elmwood Ave., Oak Park, Ill. 11-30

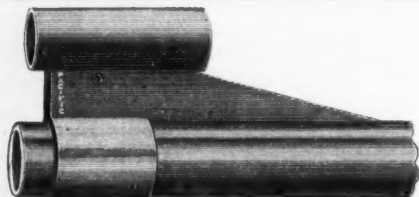
WANTED—30-06, .30-40 cartridges, case lots; 1903 Springfield, fair looks, accurate, cheap. Chas. H. Miller, Ransom, Kans. 11-30

WANTED—Old gun catalogues; extra heavy silver watch; .44 or .45 Colt S. A. or Bisley; .45 barrel and cylinder for Bisley. Fred Wainwright, Grayling, Mich. 11-30

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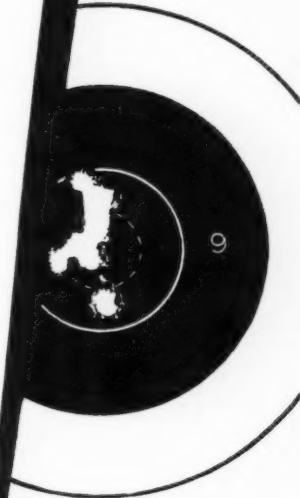
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Cordially yours,

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THE excellent grouping shown by the targets reproduced herewith, backed by Mr. Muntener's unsolicited testimony, is indisputable evidence of the uniformly high quality of U. S. Self-Cleaning Cartridges—not specially selected cartridges, but cartridges purchased by Mr. Muntener from the regular stock of an Oakland, California, hardware store.

All the targets on this page are ten-shot groups by Mr. Muntener, made at fifty yards outdoors. The greatest spread of any group shown is $\frac{3}{8}$ of an inch.

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Fig. 1—Crimping Operation

The Crimp of a Shotshell

THERE are two main types of crimp applied to shotshells—one square, the other rounded. The round crimp is in more general use in this country. The crimp is applied by a rapidly rotating die that turns the mouth of the shell over as it is forced into the die. Figure 1 shows the apparatus used at Brandywine Laboratory to crimp the shells loaded for proof tests of smokeless shotgun powders.

The crimping of the mouth of a paper shell not only holds the wads and shot in place, but controls to a great extent the uniformity of performance of the cartridge. It should be understood that the turning over of the paper shell during the crimping is a deforming operation and that while the fibres of the paper tube are weakened by being creased, the double thickness gives the turn-over its strength. When a crimp is too long it is weak and will open out too easily under pressure. Too short a crimp is likewise weak, as it has not been bent over sufficiently to

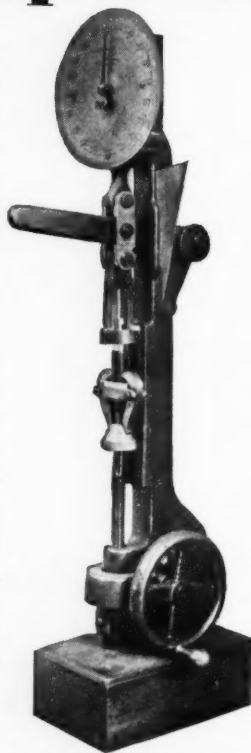


Fig. 2—Crimp Testing Apparatus

support itself. It can thus be seen that each shell should have the same normal length of crimp to avoid irregularities in shooting.

To test the uniformity of crimp, the machine illustrated in Figure 2 is used at Brandywine Laboratory. The shell is cut in half and the front end emptied. The top shot wad is removed and replaced by a plunger which fits under the crimp. The lower part of the shell is gripped by claws. As the wheel on the side of the machine is turned, the plunger pulls the crimp loose and the strength of pull is registered on the scale. As long as any given number of shells show but very little variation in crimp strength, assurance is provided that loading conditions are uniform.

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